APPENDIX A

VARIOUS FIGURES FROM 2004 MCCALL RI REPORT

1. X-Sections, RI Figures 6A through 6E
2. TPH groundwater time trend concentration graph from RI Appendix
3. LPAH and HPAH groundwater time trend graphs from RI Appendix

TONKON TORP LLP
ATTORNEYS

1600 Pioneer Tower
888 SW Fifth Avenue
Portland, Oregon 97204
503.221.1440

DAVID J. PETERSEN
ADMITTED TO PRACTICE IN OREGON AND CALIFORNIA

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May 20, 2008

VIA CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NEWCO, Inc.
6900 Fox Avenue South
Seattle, WA 98108
Attn: Bob Code

Re: September 2006 spill of hydrofluoric acid in Portland, Oregon

To Whom It May Concern:

We represent your landlord, GWC Properties, Inc., with respect to your lease of property at 5740 NW Front Avenue in Portland pursuant to an Industrial Real Estate Lease dated June 22, 2001 (the "Lease"). We understand that the puncture of a 55-gallon drum by a forklift on the loading dock led to a spill of hydrofluoric acid on the leased premises in September 2006. We further understand that DEQ became aware of the spill around September 27, 2006 and inspected the facility on September 28, 2006. Among other things, DEQ determined that you did not promptly report the spill to the state Office of Emergency Management, as required by state law, nor did you take appropriate and timely steps to clean up the spill. In March 2008, you were assessed a $27,200 fine by DEQ.

Based on this information, it appears that you have committed several breaches of the Lease. Generally speaking, you have breached your covenant in Section 5.02 of the Lease to not use the property in a manner that constitutes a violation of any law, ordinance, governmental regulation, or order. More specifically, you also have breached your obligations in Sections 15.1.2 and 15.1.3 of the Lease. Upon the discovery of a release of hazardous substances on the premises, Section 15.1.2 obligates you to "immediately take ... all actions necessary" to comply with all laws regarding governmental notification of the release, to remedy the situation, and to remove or remediate the released substances. It appears from the information available to us that you did not immediately notify DEQ or the Office of Emergency Management and did not take proper or prompt action to clean up the premises and dispose of the spilled acid.

Further, you were notified by DEQ to take action to remediate the release no later than late September 2006, yet you never notified your landlord of DEQ's action or provided the landlord with copies of relevant documents, as required by Section 15.1.3 of the Lease. Your

failure to report this release to your landlord raises the concern that there have been other unreported releases, and therefore additional breaches of the Lease by you.

The breaches of the Lease described above are non-curable breaches that constitute defaults under Section 10.02(c) of the Lease, and entitle the landlord to the remedies in Section 10.03, including termination of the Lease. However, the landlord is willing to forgo its remedies for these defaults arising out of the September 2006 hydrofluoric acid spill, provided that you deliver to landlord within 10 days of this letter all documentation in your possession related to the September 2006 spill and any and all other spills that have occurred on the premises during the term of the Lease, including without limitation all government agency correspondence.

This conditional forbearance is limited only to the September 2006 hydrofluoric acid spill for which you have been fined $27,200, and does not extend to any other releases, known or unknown, past or future, disclosed or undisclosed. Further, in the unfortunate event of any future releases, no matter how small, the landlord will expect strict and precise compliance with all of the tenant's obligations under the Lease, including without limitation its obligations pursuant to Sections 15.1.2 and 15.1.3. Please note that the term "release" is defined very liberally at 42 US §9601(22) to include any "spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing...." This statute is referenced in the Lease. In the event of your future failure to comply with the Lease, the landlord will take prompt action which may include termination of the Lease pursuant to Section 10.03(a).

Please contact me or my partner Max Miller if you have any questions concerning this letter.

Best regards,

David J. Petersen

DJP/DJP
cc: Mr. Ted McCall, GWC Properties, Inc.
Mr. Max Miller

030980\00003\983595 V001

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

April 30, 2008

Jim Orr
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Plan to Update 2004 Remedial Investigation and 2006 Source Control Evaluation reports for the McCall Oil Site, ECSI No. 134

Dear Mr. Orr:

The purpose of this letter is to provide DEQ with our plan to update and revise the following two reports.

Remedial Investigation Report, McCall Oil and Chemical Corporation (Anchor Environmental, 2004) (RI Report)

Assessment of McCall Oil and Chemical Site Impacts to the Willamette River (Anchor Environmental, 2006) (Source Control Evaluation Report)

In a May 1, 2007 letter, DEQ provided comments on the 2004 RI Report. McCall has not received DEQ comments on the 2006 Source Control Evaluation Report. With receipt of DEQ's March 14, 2008 e-mail identifying risk-screen criteria, McCall is able to prepare this plan for revising the two reports. Per DEQ's request, two spreadsheets are attached to this plan, where stormwater and catch basin sediment data are screened against criteria identified by DEQ.

The primary focus of DEQ comments in the May 1 letter is the requirement to screen the site data against risk-screen criteria identified by DEQ as appropriate for this project. As discussed with DEQ at a January 10, 2008 meeting, the re-screening of upland human health exposure pathways are proposed to occur in the revised RI Report. The re-screening of exposure pathways that potentially affect the Willamette River are proposed to occur in the revised Source Control Evaluation Report. With this approach, the revised Source Control Evaluation Report contains a weight of evidence evaluation, as required in the DEQ Joint Source Control Strategy (JSCS).

The general and specific comments from the May 1 DEQ comment letter are reproduced in the remaining sections of this plan. Following each comment, the McCall response is provided in bold italics.

General Comments

The screening of groundwater, surface water, and catch basin sediment was conducted using the draft EPA/DEQ Joint Source Control Strategy (JSCS) for Portland Harbor available in 2004. The source control strategy has been updated and revised. The current December 2005 strategy (www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm) should be used in the revision of the RI report. Note that DEQ is in the process of updating Table 3-1 of the JSCS to include screening values from DEQ's recent Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment (www.deq.state.or.us/lq/pubs/docs/cu/GuidanceAssessingBioaccumulative.pdf), and the switch from EPA Region 9 preliminary remediation goals to EPA Region 6 screening values (www.deq.state.or.us/lq/cu/health.htm). The new values should be used with our existing JSCS guidance.

The main differences from the draft to the current JSCS include the use of chronic ambient water quality criteria (AWQC) for ecological receptors, and water consumption and fish ingestion for humans.

Agreed. The site data will be screened using the current DEQ JSCS spreadsheets or other criteria as requested by DEQ in the following Specific Comments.

Specific Comments

Section 1.2 Conclusions based on exceedances of complete pathways to the Willamette River using prior screening level values should be adjusted in this section and throughout the RI based on comparison to current DEQ Joint Source Control Strategy (JSCS) levels; see comments on screening tables. Please contact Mike Poulsen at the DEQ (503-229-6773) concerning appropriate screening levels.

Agreed. Exposure pathways to the river will be screened and a weight of evidence evaluation provided in the updated Source Control Evaluation report.

Sections 1.3.2 and 5.2 Please clarify why a risk assessment would not be conducted as part of the existing Voluntary Agreement, as risk assessments are typically conducted as part of the RI. The DEQ would prefer to use the existing Agreement to complete the risk assessment.

Agreed. A risk assessment could be completed under the existing Agreement. When DEQ approves the revised RI report, McCall can move forward to prepare the upland risk assessment.

Section 1.3.3 Bioaccumulation screening of potential upland source should be conducted according to the JSCS and the DEQ's January 31, 2007 *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment.*

Agreed.

Section 3.4.1 In addition to potential sediment exposure to workers cleaning out stormwater catch basins, there is also a potentially complete exposure pathway between catch basin sediment and Willamette River ecological receptors. Also, there is a potentially complete pathway between river sediment and fishers.

The 2006 Source Control Evaluation report provides a description of the stormwater BMPs in place at the site. The revised Source Control Evaluation report will also provide a diagram of the reconstructed catch basin and filter system at location S-3.

Section 3.4.2 Adjacent in-water sediment data is not the only basis for establishing site contaminants of interest. Current and historical site operations and existing monitoring data should also be included. Please clarify that the list of site constituents of interest is complete.

A comprehensive evaluation of site operations, historic release records and monitoring data was conducted for the purpose of identifying constituents of potential concern (COPC).The findings of that evaluation were described in the McCall Oil & Chemical Corporation Remedial Investigation Proposal (IT Corporation, 2000). The COPCs identified in the RI proposal were further identified in the McCall Oil and Chemical Corporation Focused Remedial Investigation Workplan (IT Corporation, 2000). Through this process a complete list of COPCs was identified for the remedial investigation, which was subsequently approved by DEQ.

Section 4.4.2.2

- Concentration units should be added to Appendix D trend plots.

Agreed

- Please add figures showing soil and groundwater plumes that exceed screening levels.

The 2004 RI report has maps of PAH and chlorinated solvents in groundwater. McCall is willing to add more maps to the report, and will contact DEQ to discuss which COPC should also be illustrated on a map.

- Please expand the discussion concerning potential on and off-site sources of volatile organic compounds detected in groundwater monitoring well MW-10.

Agreed

- Please discuss and interpret results of the most recent metals analyses in groundwater. There appears to be areas of dissolved arsenic elevated above background levels.

Agreed

Section 4.5 This section will be amended with the results of the current stormwater evaluation, including a figure showing stormwater drainage basins, flow directions, and discharge points and other items in the DEQ's March 5, 2007 comment letter.

Agreed

Section 4.5.1

- Please clarify whether NPDES sampling is conducted weekly at Outfall S-4, and provide sampling results.
- The DEQ understands that a new filter system was installed in the large vault prior to Outfall S-3; please describe this new feature and document its effectiveness.
- Please discuss how stormwater and catch basin sediment data over time shows the effectiveness of stormwater best management practices implemented at the site.

Agreed

Section 4.6.1 and Table 13

- Shoreline groundwater well data should be screened against JSCS values and conclusions should be revised accordingly.
- Groundwater contaminants were screened for current site uses but should also consider likely future uses of the site (e.g., groundwater vapors entering a new building constructed on site).

Agreed

Section 4.6.2 Please clarify that soil constituents left in place during the wood treating chemical source area removal are below applicable screening levels.

Agreed. We will screen the data from the confirmation soil samples obtained during the cleanup.

Section 4.6.3 and Table 10 The current EPA/DEQ Joint Source Control Strategy for Portland Harbor should be used for screening stormwater (including ecological effects) and conclusions should be revised accordingly. Final AWQC are not available for PAHs, so McCall Oil proposed screening values based on other work by EPA (2003). These screening values can be used on an interim basis; note that a similar approach is included in the Comprehensive Round 2 Site Characterization Summary and Data Gaps Report for the Portland Harbor site. However, EPA and other agencies are in the process of reviewing the use of water screening values for PAHs. A decision on the use of water screening values for PAHs is expected in the next few months. For consistency, we will likely require that the same values be applied to the McCall site.

Screening of catch basin sediment should include ecological effects.

The attached spreadsheets contain updated stormwater and catch basin sediment data screened against the criteria e-mailed by Jim Orr to Anchor on April 11, 2008. A comprehensive evaluation of stormwater and catch basin risk screening will be provided in the revised Source Control Evaluation report.

Sections 4.7 and 5.1 Adjust COPCs to reflect revised data screening, including groundwater, stormwater, catch basin sediment, and erodible soil that may be migrating to the Willamette River.

Agreed. Additionally, an evaluation of whether soil erosion is a complete site pathway will be included in the revised source control evaluation.

Section 5 This section should also address potential Portland Harbor-related data gaps based on the revised screening against JSCS values.

Agreed

Table 5 The designation of "> Saturation" for some of the RBCs should be "> Solubility."

Agreed

Tables 6 and 7

- The designation of "> Saturation" for some of the RBCs should be "> Solubility." At the time of the draft report in 2004, default RBCs were not available from DEQ for some of the chemicals. DEQ now has RBCs available for most chemicals (see http://www.deq.state.or.us/lq/rbdm.htm). For chemicals without RBCs, the RBCs can be calculated using DEQ's Risk-Based Decision Making spreadsheet.
- PAHs and SVOCs were screened using RBCs for pathways of volatilization to outdoor air, vapor intrusion to indoor air, and excavation worker (Table 6). However, VOCs should also be screened for the excavation worker pathway. Other criteria from the JSCS should be included.
- These tables list only screening criteria for human health. Screening should be done for potential ecological effects.

Based on the March 14, 2008 e-mail from Jim Orr to John Edwards, it is appropriate for McCall to use the current 2007 RBDM spreadsheet for selecting risk-based concentration screening values. The human health screening information for upland exposure pathways will be in the revised RI report and the screening for river-exposure pathways will be in the revised Source Control Evaluation report.

Table 11 Some of the RBCs are indicated as "> Sat." An RBC for direct contact is still relevant, however, and should be noted even if the value is also noted to be above a saturation limit. This will not alter any of the conclusions drawn from this table.

Agreed.

Table 12 Regional background values can be referenced from DEQ's memorandum on default background concentrations for metals (28 October 2002). This does not alter the values presented.

Agreed.

Tables 13 and 14 The approach used by DEQ is to initially screen using total concentrations of metals, not dissolved concentrations. The screening criteria in the

JSCS should be used. See the comment on Section 4.6.3 regarding the proposed PAH screening values for PAHs.

Agreed.

Figures 7 and 8 See the DEQ's July 30, 2003 RI comments on using average groundwater concentrations.

We will review the referenced comments.

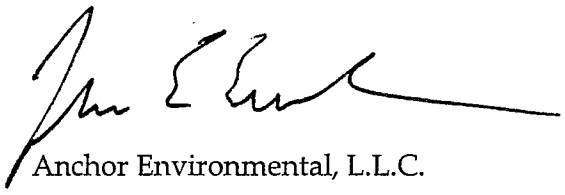
We previously planned to propose revisions to the Table of Contents for the revised RI and Source Control Evaluation Reports. However, review of those reports indicates that the table of contents should not require revision. The text sections describing the screening of river exposure pathways and the screening tables for those pathways will be in the Source Control Evaluation report rather than the RI report.

Following receipt of DEQ approval of this proposal, we estimate that it will take about six weeks to revise and submit the reports to DEQ.

Please contact me if you have any questions

Respectfully Submitted,

John E. Edwards, RG, CEG



Anchor Environmental, L.L.C.

Cc: Ted McCall
John Renda, Anchor
Todd Thornburg, Anchor

Attachments: McCall Stormwater Screening Table
McCall Catch Basin Sediment Screening Table

CATCH BASIN SEDIMENT DATA REPORTING AND SCREENING TABLE

INSTRUCTIONS FOR USING THIS TEMPLATE:

This worksheet is protected so you cannot add or delete rows; you may only add data. If you did not analyze for a chemical within a group, fill in "NA" for Not Analyzed. If you did not analyze a whole group, leave it blank.

TO ADD DATA, fill in the columns to the right of the screening table. Label each column with the sample location (e.g., CB #1) and date of the sample. Detected compounds should be in bold text and compounds exceeding SLVs should be shaded. Include qualifiers. For undetected compounds, report them as being less than the method detection level (e.g., <0.5)

	Screening Value[1]	S-1		S-1		S-2		S-2		S-3		S-3		S-3		S3-01C	
		12/15/00		11/12/07		12/15/00		11/12/07		12/15/00		11/04/04		05/02/07		12/15/00	
Units	**µg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Metals/Inorganics																	
Aluminum (pH 6.5 - 9.0)	--	NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	64000	NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	7000	**5200**		**4400**		**7500**		**4600**		**37900**		**25600**		**10000**		**4400**	
Arsenic III	--	NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium	4980	**2000**		**1760**		**1420**		**1110**		**2860**		**1900**		**1600**		**120**	
Chromium, total	111000	**48900**		**122000**	J	**63700**		**95400**	J	**144000**		**189000**		**79100**		**11900**	
Chromium, hexavalent	--	NA		NA		NA		NA		NA		NA		NA		NA	
Copper	149000	**137000**		**214000**	J	**316000**		**115000**	J	**1050000**		**1360000**		**321000**		**27400**	
Lead	17000	**145000**		**312000**	J	**211000**		**256000**	J	**454000**		**600000**		**206000**		**8580**	
Manganese	1100000			**845000**				**511000**						**462000**			
Mercury	70			**80**				**200**						**240**			
Methyl Mercury	--	NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	48600			**51800**				**38500**						**44400**			
Selenium	5000	NA		NA		NA		NA		NA		NA		NA		NA	
Silver	5000			550				**330**						**920**			
Zinc	459000	**638000**		**1550000**		**584000**		**630000**		**985000**		**752000**		**938000**		**82700**	
Perchlorate	--																
Cyanide	--																
Butyltins [12]																	
Monobutyltin	--																
Dibutyltin	--																
Tributyltin	1800																
Tetrabutyltin	--																
PCBs Aroclors																	
Aroclor 1016	530			13	U			13	U					11	U		
Aroclor 1221	--			26	U			26	U					22	U		
Aroclor 1232	--			13	U			13	U					11	U		
Aroclor 1242	--			**23**	P			13	U					11	U		
Aroclor 1248	1,500			13	U			13	U					11	U		
Aroclor 1254	300			**57**				28	Ui					**69**			
Aroclor 1260	200			**46**				**30**						**75**			
Aroclor 1262	--	NA		NA		NA		NA		NA		NA		NA		NA	
Aroclor 1268	--	NA		NA		NA		NA		NA		NA		NA		NA	
Total PCBs	0.39			**126**				**30**						**144**			
PCB Congeners		NA		NA		NA		NA		NA		NA		NA		NA	
All 209 PCB congener target analytes																	
3,3',4,4'-TCB	0.052	NA		NA		NA		NA		NA		NA		NA		NA	
3,4,4',5-TCB	0.017	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4'-PeCB	0.017	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,4,4',5-PeCB	0.017	NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5-PeCB	0.12	NA		NA		NA		NA		NA		NA		NA		NA	
2',3,4,4',5-PeCB	0.21	NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5-PeCB	0.00005	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5'-HxCB	0.21	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5-HxCB	0.21	NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5,5'-HxCB	0.21	NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5,5'-HxCB	0.00021	NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5,5'-HpCB	1.2	NA		NA		NA		NA		NA		NA		NA		NA	
Oxygen-Containing Compounds																	
Benzoic Acid	--																
Benzyl Alcohol	--																
Dibenzofuran	--	**100**	JD	**100**	JD	**20**	JD	**20**	JD	**200**	JD	**69**	JD	**67**		12	U
Isophorone	--																
Phenols and Substituted Phenols																	
Phenol	50																
2-Methylphenol (o-Cresol)	--																
4-Methylphenol (p-Cresol)	--	13000	U	650	UJ	1900	U	**7100**	J	**4000**	JD	**3000**	JD	680	U	240	U
2,4-Dimethylphenol	--																
2-Chlorophenol	--																
2,4-Dichlorophenol	--																
2,4,5-Trichlorophenol	--																
2,4,6-trichlorophenol	--																
2,3,4,6-Tetrachlorophenol	--																
Pentachlorophenol	1000																
4-Chloro-3-methylphenol	--																
2-Nitrophenol	--																
4-Nitrophenol	--																
2,4-Dinitrophenol	--																
Methyl-4,6-Dinitrophenol 2-	--																

	Screening Value[1]	S-1		S-1		S-2		S-2		S-3		S-3		S-3		S3-01C	
		12/15/00		11/12/07		12/15/00		11/12/07		12/15/00		11/04/04		05/02/07		12/15/00	
Units	**µg/kg**	**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**		**µg/kg**	
Phthalate Esters																	
Dimethylphthalate	--			650	UJ			640	UJ					680	U		
Diethylphthalate	600			650	UJ			640	UJ					680	U		
Di-n-butylphthalate	100			1300	UJ			1300	UJ					**840**	D		
Butylbenzylphthalate	--	**1500**	D	**1200**	J	**2500**	D	**7600**	J	**5000**	D	**930**	JD	680	U	**1**	J
Di-n-octylphthalate	--	13000	U	13000	UJ	1900	U	1300	UJ	14000	U	**11000**	JD	680	U	**2**	J
bis(2-Ethylhexyl)phthalate	800			**8700**	J			**9000**	J					**12000**	D		
Polycyclic Aromatic Hydrocarbons																	
Naphthalene	561	**200**	JD	**270**		**50**	JD	**290**		**400**	JD	**64**	JD	**130**		12	U
2-Methylnaphthalene	200	**100**	JD	**180**		**50**	JD	**33**		**400**	JD	31	JU	80		**0.6**	J
Acenaphthylene	200	**40**	JD	**42**		**20**	JD	**28**		**60**	JD	37	JU	31		12	U
Acenaphthene	300	**200**	JD	**230**		**30**	JD	**21**		720	U	26	JU	24		12	U
Fluorene	536	**100**	JD	**130**		**20**	JD	**26**		**3600**	D	**72**	JD	**47**		12	U
Phenanthrene	1,170	**1500**	D	**950**		**320**	D	**320**		**3600**	D	**660**	JD	**670**		12	U
Anthracene	845	**400**	JD	**230**		**50**	JD	**56**		**2600**	D	**140**	JD	**58**		12	U
Fluoranthene	2,230	**2600**	D	**1400**		**690**	D	**660**		**5800**	D	**1400**	JD	**780**		**3**	J
Pyrene	1,520	**2600**	D	**1300**		**770**	D	**640**		**5500**	D	**1200**	JD	**1000**		**3**	J
Benzo(a)anthracene	1,050	**1300**	D	**470**		**440**	D	**220**		**2500**	D	**400**	JD	**230**		**2**	J
Chrysene	1,290	**2000**	D	**880**		**740**	D	**520**		**5300**	D	**1100**	JD	**390**		**3**	J
Benzo(b)fluoranthene	--	**2000**	D	**930**		**780**	D	**750**	X	**4100**	D	**1100**	JD	**570**		**3**	J
Benzo(k)fluoranthene	13,000	**1500**	D	**300**		**540**	D	6.3	U	**3400**	D	**270**	JD	**180**		**2**	J
Benzo(a)pyrene	1,450	**1900**	D	**540**		**670**	D	**330**		**3700**	D	**490**	JD	**320**		**2**	J
Indeno(1,2,3-cd)pyrene	100	**1500**	D	**570**		**490**	D	**400**		**3200**	D	**530**	JD	**500**		**2**	J
Dibenz(a,h)anthracene	1,300	**300**	JD	**88**		**100**	JD	**78**		**800**	JD	**150**	JD	**100**		24	U
Benzo(g,h,i)perylene	300	**1600**	D	**810**		**500**	D	**690**		**3600**	D	**790**	JD	**1100**		**3**	J
Chlorinated Dioxins and Furans																	
2,3,7,8,-TCDD (Toxicity Equivalence Quotient)	--																
2,3,7,8,-TCDD	0.0000091																
2,3,7,8,-TCDF	0.00077																
1,2,3,7,8,-PeCDD	0.0026																
1,2,3,7,8,-PeCDF	0.0026																
2,3,4,7,8,-PeCDF	0.00003																
2,3,4,7,8,-PeCDF	--																
1,2,3,6,7,8,-HxCDD	--																
1,2,3,7,8,9,-HxCDD	--																
1,2,3,4,7,8,-HxCDF	0.0027																
1,2,3,6,7,8,-HxCDF	0.0027																
1,2,3,7,8,9,-HxCDF	0.0027																
2,3,4,6,7,8,-HxCDF	0.0027																
1,2,3,4,6,7,8,-HpCDD	0.69																
1,2,3,4,6,7,8,-HpCDF	0.69																
1,2,3,4,7,8,9,-HpCDF	0.69																
OCDD	23																
OCDF	23																
Total tetrachlorinated dioxins	--																
Total pentachlorinated dioxins	--																
Total hexachlorinated dioxins	--																
Total heptachlorinated dioxins	--																
Total tetrachlorinated furans	--																
Total pentachlorinated furans	--																
Total hexachlorinated furans	--																
Total heptachlorinated furans	--																
Not on Table 3-1																	
TPH Diesel	--	**400000**	H	**590000**	DH	**300000**	H	**1300000**	DH	**2400000**	H	**1600000**	JH	**1400000**	DH	10000	
TPH Heavy Oil	--	**1900000**	O	**4600000**	DO	**2200000**	DO	**11000000**	DO	**7600000**	DO	**8500000**	JO	**9300000**	DO	**30000**	U
TPH-Gx	--	**26000**	Y	13000	U	**21000**	Y	13000	U	**580000**	Y	210000	U	14000	U	10000	Y
Total Organic Carbon	--																U
Total Solids	--																

[1]The source of each SLV is documented in Table 3.1 of the Portland Harbor Joint Source Control Strategy, which can be viewed at http://www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/docs/JSCSFinalTable03_1.pdf

STORMWATER DATA REPORTING AND SCREENING TABLE FOR PORTLAND HARBOR SITES [1]

INSTRUCTIONS FOR USING THIS TEMPLATE:

This worksheet is protected so you cannot add or delete rows; you may only add data. If you did not analyze for a chemical within a group, fill in "NA" for Not Analyzed. If you did not analyze a whole group, leave it blank.

TO ADD DATA, fill in the columns to the right of the screening table. Label each column with the sample location (e.g., CB #1) and date of the sample. Detected compounds should be in bold text and compounds exceeding SLVs should be shaded. Include qualifiers. For undetected compounds, report them as being less than the method detection level (e.g., <0.5).

	SLV for Portland Harbor[2]	S-1W		S-1W		S-1W		S-1W		S-2W		S-2W		S-2W		S-2W		S-2W		S-3W		S-3W		S-3W		S-3W	
		12/20/00		03/06/02		04/07/05		11/12/07		12/20/00		03/06/02		04/07/05		05/02/07		11/12/07		12/15/00		02/15/01		03/06/02		04/07/05	
Units		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**		**µg/L**	
Metals/Inorganics (TOTAL)																											
Aluminum (pH 6.5 - 9.0)	50	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	0.045	0.5	U	0.5	U	0.5	U	**0.7**		1	U	0.5	U	0.5	U	0.5	U	**0.8**						0.5	U	0.5	U
Arsenic III	190	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium	0.094	0.05	U	0.20	U	**0.16**		**0.21**		**0.22**		0.20	U	**0.07**		**0.12**		**0.30**						0.2	U	1.05	
Chromium, total	**100**	**0.4**		**0.4**		**7**		**2.3**		**2.0**		**0.6**		**1.1**		**1.1**		**5.5**						**1.2**		**1.9**	
Chromium, hexavalent	11	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	2.7	**3.8**		**3.7**		**13.5**		**20.2**		**9.9**		**10.3**		**9.4**		**11.3**		**25.9**						**13.1**		**8.6**	
Lead	0.54	**0.43**		**0.31**		**27.1**		**10.1**		**5.93**		**1.13**		**2.33**		**3.20**		**23.5**						**2.30**		**4.14**	
Manganese	50							**25.2**								**8.36**		**72.3**									
Mercury	0.77							0.2	U							0.2	U	0.2	U								
Methyl Mercury	0.0028	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	16							**2.3**								**1.2**		**3.8**									
Selenium	5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Silver	0.12							**0.02**								**0.02**		0.02	U								
Zinc	36	**200**		**195**		**86.9**		**154**		**113**		**73.3**		**51.1**		**149**		**353**						**84.2**		**189**	
Perchlorate	<24.5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cyanide	5.2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Metals/Inorganics (DISSOLVED)																											
Aluminum (pH 6.5 - 9.0)	50	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	0.045	NA		NA		0.5	U	0.5	U	NA		NA		0.5	U	0.5	U	0.6		1	U	NA		NA		0.5	U
Arsenic III	190	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium	0.094	NA		NA		**0.07**		**0.07**		NA		NA		**0.05**		**0.05**		**0.10**		**0.63**		NA		NA		**0.96**	
Chromium, total	100	NA		NA		**1.3**		**0.5**		NA		NA		**0.7**		**0.7**		**0.8**		**2.9**		NA		NA		**1.3**	
Chromium, hexavalent	11	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	2.7	NA		NA		**7.9**		**9.6**		NA		NA		**6.0**		**8.8**		**8.3**		**29.6**		NA		NA		**7.1**	
Lead	0.54	NA		NA		**0.61**		**0.32**		NA		NA		**0.7**		**0.86**		**1.1**		**1.62**		NA		NA		**1.06**	
Manganese	50	NA		NA		NA		**0.7**		NA		NA		NA		**3.25**		**20.5**		NA		NA		NA		NA	
Mercury	0.77	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Methyl Mercury	0.0028	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	16	NA		NA		NA		**0.9**		NA		NA		NA		**1.2**		**1.2**		NA		NA		NA		NA	
Selenium	5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Silver	0.12	NA		NA		NA		0.02	U	NA		NA		NA		0.02	U	0.02	U	NA		NA		NA		NA	
Zinc	36	NA		NA		**47.8**		**92.2**		NA		NA		**42.9**		**101**		**184**		**596**		NA		NA		**182**	
Perchlorate	<24.5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cyanide	5.2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Butyltins																											
Monobutyltin	--																										
Dibutyltin	--																										
Tributyltin	0.072																										
Tetrabutyltin	--																										
PCBs Aroclors		NA		NA		NA																					
Aroclor 1016	0.96	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1221	0.034	NA		NA		NA		0.39	U	NA		NA		NA		0.39	U	0.4	U	NA		NA		NA		NA	
Aroclor 1232	0.034	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1242	0.034	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1248	0.034	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1254	0.033	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1260	0.034	NA		NA		NA		0.2	U	NA		NA		NA		0.2	U	0.2	U	NA		NA		NA		NA	
Aroclor 1262	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Aroclor 1268	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total PCBs	0.000064	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB Congeners	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
All 209 PCB congener target analytes	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4'-TCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,4,4',5-TCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4'-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2',3,4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5,5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5,5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5,5'-HpCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Oxygen-Containing Compounds																											
Benzoic Acid	42	NA		NA		NA				NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzyl Alcohol	8.6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibenzofuran	3.7	**0.01**	J	0.014	U	0.014	U	NA	U	**0.02**	J	0.014	U	0.014	U	0.016	U	0.019	U			0.01	U	**0.019**	J	0.014	U
Isophorone	71							0.02																			

	SLV for Portland Harbor[2]	S-1W		S-1W		S-1W		S-1W		S-2W		S-2W		S-2W		S-2W		S-2W		S-3W		S-3W		S-3W		S-3W	
		12/20/00		03/06/02		04/07/05		11/12/07		12/20/00		03/06/02		04/07/05		05/02/07		11/12/07		12/15/00		02/15/01		03/06/02		04/07/05	
Units		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Phenols and Substituted Phenols																											
Phenol	2560	NA		NA		NA				NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Methylphenol (o-Cresol)	13	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Methylphenol (p-Cresol)	180	**0.3**	J	**0.23**	J	0.051	U	NA	U	**0.49**		**0.089**	J	0.051	U	0.48	U	0.50	U			0.48	U	**0.220**	J	**0.120**	J
2,4-Dimethylphenol	730	NA		NA		NA		0.50		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Chlorophenol	30	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dichlorophenol	110	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4,5-Trichlorophenol	3600	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4,6-trichlorophenol	2.4	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,4,6-Tetrachlorophenol	1,100	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Pentachlorophenol	0.56	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Chloro-3-methylphenol		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2-Nitrophenol	150	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
4-Nitrophenol	150	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,4-Dinitrophenol	73	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Methyl-4,6-Dinitrophenol 2-	150	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Phthalate Esters																											
Dimethylphthalate	3	NA		NA		NA		NA		NA		NA		NA		**0.22**		**0.66**		NA		NA		NA		NA	
Diethylphthalate	3	NA		NA		NA		**0.36**	U	NA		NA		NA		**0.47**		**0.24**		NA		NA		NA		NA	
Di-n-butylphthalate	3	NA		NA		NA		0.20	U	NA		NA		NA		**0.21**		**0.35**		NA		NA		NA		NA	
Butylbenzylphthalate	3	**0.1**	J	**0.19**	J	**0.20**		0.20	U	**0.1**	J	**0.05**	J	**0.076**	J	0.20	U	0.20	U	NA		**0.08**	J	**0.092**	J	**0.089**	J
Di-n-octylphthalate	3	0.003	U	0.032	U	0.032	U	0.20	U	0.003	U	0.032	U	**0.11**	J	0.20	U	0.20	U	NA		0.95	U	0.033	U	0.032	U
bis(2-Ethylhexyl)phthalate	2.2	NA		NA		NA		0.20	U	NA		NA		NA		**1.4**		**6.7**		NA		NA		NA		NA	
Polycyclic Aromatic Hydrocarbons																											
Naphthalene	0.2	**0.03**	J	**0.03**	J	**0.031**	J	**0.026**	J	**0.07**	J	**0.025**	J	0.012	U	**0.015**		**0.020**		NA		**0.07**	J	**0.025**	J	0.012	U
2-Methylnaphthalene	0.2	**0.03**	J	**0.02**	J	0.012	U	0.020	UJ	**0.05**	J	**0.014**	J	0.012	U	0.0077	U	0.019	U	NA		**0.10**		0.012	U	0.012	U
Acenaphthylene	0.2	**0.01**	J	0.01	U	**0.037**	J	0.020	U	**0.02**	J	0.011	U	**0.026**	J	**0.019**	D	0.019	U	NA		0.10	U	0.011	U	0.011	U
Acenaphthene	0.2	**0.02**	J	0.01	U	0.009	U	0.020	UJ	**0.02**	J	0.009	U	0.009	U	0.016	U	0.019	U	NA		0.10	U	0.009	U	0.009	U
Fluorene	0.2	**0.02**	J	0.01	U	**0.026**	J	0.020	UJ	**0.04**	J	0.013	U	0.012	U	0.016	U	0.019	U	NA		**0.02**	J	0.013	U	0.012	U
Phenanthrene	0.2	**0.07**	J	**0.03**	J	**0.190**	J	**0.065**	J	**0.25**		**0.043**	J	**0.045**	J	**0.027**		**0.040**		NA		**0.20**		**0.054**	J	**0.057**	J
Anthracene	0.2	0.01	U	0.02	U	**0.039**	J	0.020	UJ	**0.02**	J	0.016	U	0.015	U	0.0077	U	0.019	U	NA		0.10	U	0.015	U	0.015	U
Fluoranthene	0.2	**0.02**	J	0.013	U	**0.230**		**0.093**	J	**0.099**		**0.022**	J	**0.059**	J	**0.018**		**0.031**		NA		**0.06**	J	**0.023**	J	**0.040**	J
Pyrene	0.2	**0.02**	J	0.015	U	**0.280**		**0.080**	J	**0.12**		**0.025**	J	**0.059**	J	**0.019**		**0.032**		NA		**0.03**	J	**0.022**	J	**0.037**	J
Benzo(a)anthracene	0.018	0.005	U	0.012	U	**0.081**	J	**0.031**	J	**0.03**	J	0.013	U	0.012	U	0.0077	U	0.019	U	NA		**0.007**	J	0.012	U	0.012	U
Chrysene	0.018	**0.008**	J	0.014	U	**0.140**	J	**0.066**	J	**0.06**	J	0.015	U	**0.014**	U	0.0077	U	0.019	U	NA		**0.03**	J	0.015	U	0.014	U
Benzo(b)fluoranthene	0.018	**0.006**	J	0.020	U	**0.150**	J	**0.065**	J	**0.04**	J	0.021	U	**0.021**	J	0.0077	U	0.019	U	NA		**0.01**	J	0.020	U	0.020	U
Benzo(k)fluoranthene	0.018	**0.004**	J	0.020	U	**0.049**	J	**0.021**	J	**0.03**	J	0.021	U	0.020	U	0.0077	U	0.019	U	NA		**0.008**	J	0.020	U	0.020	U
Benzo(a)pyrene	0.018	0.006	U	0.016	U	**0.100**	J	**0.031**	J	**0.03**	J	0.017	U	0.020	U	0.0077	U	0.019	U	NA		0.095	U	0.017	U	0.016	U
Indeno(1,2,3-cd)pyrene	0.018	**0.006**	J	0.024	U	**0.089**	J	**0.035**	J	**0.04**	J	0.026	U	0.020	U	0.0077	U	0.019	U	NA		**0.01**	J	0.025	U	0.024	U
Dibenz(a,h)anthracene	0.018	0.004	U	0.031	U	0.031	U	0.02	UJ	**0.009**	J	0.032	U	0.020	U	0.0077	U	0.019	U	NA		0.19	U	0.031	U	0.031	U
Benzo(g,h,i)perylene	0.2	**0.007**	J	0.017	U	**0.140**	J	**0.041**	J	**0.06**	J	0.018	U	0.020	U	**0.0085**		0.019	U	NA		**0.01**	J	0.017	U	0.017	U
Chlorinated Dioxins and Furans																											
2,3,7,8,-TCDD (Toxicity Equivalence Quotient)	5.1E-09																										
2,3,7,8,-TCDD	5.1E-09																										
2,3,7,8,-TCDF	--																										
1,2,3,7,8,-PeCDD	--																										
1,2,3,7,8,-PeCDF	--																										
2,3,4,7,8,-PeCDF	--																										
2,3,4,7,8,-PeCDF	--																										
1,2,3,6,7,8,-HxCDD	--																										
1,2,3,7,8,9,-HxCDD	--																										
1,2,3,4,7,8,-HxCDF	--																										
1,2,3,6,7,8,-HxCDF	--																										
1,2,3,7,8,9,-HxCDF	--																										
2,3,4,6,7,8,-HxCDF	--																										
1,2,3,4,6,7,8,-HpCDD	--																										
1,2,3,4,6,7,8,-HpCDF	--																										
1,2,3,4,7,8,9,-HpCDF	--																										
OCDD	--																										
OCDF	--																										
Total tetrachlorinated dioxins	--																										
Total pentachlorinated dioxins	--																										
Total hexachlorinated dioxins	--																										
Total heptachlorinated dioxins	--																										
Total tetrachlorinated furans	--																										
Total pentachlorinated furans	--																										
Total hexachlorinated furans	--																										
Total heptachlorinated furans	--																										
Other Analytes																											
TPH Diesel	--	100	U	110	U	**340**	H	**330**	H	100	U	110	U	**310**	Y	250	U	**500**	H			**510**	Z	**110**	Z	**550**	Y
TPH Heavy Oil	--	250	U	270	U	**880**	O	**610**	O	250	U	260	U	**430**	O	500	U	**1,600**	O			250	U	260	U	**1,000**	O
TPH-Gx	--	**1,100**	Z	110	U	100	U	250	U	100	U	**130**	Z	100	U	250	U	250	U			**1,300**	Z	110	U	**120**	Z
Total Organic Carbon	--																										
Total Suspended Solids	--																										

[1]At Portland Harbor sites, drinking water MCLs and PRGs are also

[2]The source of each SLV is

	SLV for Portland Harbor[2]	S-3W		S-3W		S-4W		S-4W Duplicate		S-4W		S-4W Duplicate		S-4W		S-4W		S-4W		S-4W	
		05/02/07		11/12/07		12/15/00		12/15/00		02/15/01		02/15/01		04/09/02		04/07/05		05/02/07		11/12/07	
Units		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Metals/Inorganics (TOTAL)																					
Aluminum (pH 6.5 - 9.0)	50	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	0.045	0.5	U	**0.7**										**0.6**		**0.5**		**1.5**		**1.1**	
Arsenic III	190	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium	0.094	**0.17**		**0.17**										**0.2**		**0.19**		**0.51**		**0.21**	
Chromium, total	**100**	**2.3**		**1.6**										**0.9**		**1.1**		**5.2**		**1.5**	
Chromium, hexavalent	11	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	2.7	**19.1**		**24.2**										**9**		**8.3**		**27.7**		**15.0**	
Lead	0.54	**4.85**		**3.96**										**3.29**		**6.15**		**36.0**		**9.93**	
Manganese	50	**23.5**		**23.3**														**169**		**54.5**	
Mercury	0.77	0.2	U	0.2	U													0.2	U	0.2	U
Methyl Mercury	0.0028	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	16	**2.7**		**2.7**														**6.9**		**3.8**	
Selenium	5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Silver	0.12	**0.07**		**0.02**														**0.12**		0.02	U
Zinc	36	**375**		**334**										**86.6**		**89.8**		**252**		**103**	
Perchlorate	<24.5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cyanide	5.2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Metals/Inorganics (DISSOLVED)																					
Aluminum (pH 6.5 - 9.0)	50	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Antimony	6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Arsenic	0.045	0.5	U	0.5		0.5	U	0.5	U	NA		NA		NA		0.5	U	0.5	U	**0.8**	
Arsenic III	190	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cadmium	0.094	**0.15**		**0.15**		**0.22**		**0.21**		NA		NA		NA		**0.09**		**0.16**		**0.01**	
Chromium, total	100	**0.9**		**0.9**		**0.8**		**0.6**		NA		NA		NA		**0.2**		**0.5**		**0.5**	
Chromium, hexavalent	11	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Copper	2.7	**12.8**		**17.6**		**4.9**		**4.7**		NA		NA		NA		**4.4**		**14.2**		**10.6**	
Lead	0.54	**0.75**		**0.90**		**0.05**		**0.04**		NA		NA		NA		**0.09**		**0.54**		**0.39**	
Manganese	50	**14.3**		**19.4**		NA		NA		NA		NA		NA		NA		**46.3**		**26.7**	
Mercury	0.77	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Methyl Mercury	0.0028	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Nickel	16	**1.9**		**2.5**		NA		NA		NA		NA		NA		NA		**2.8**		**3.0**	
Selenium	5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Silver	0.12	**0.03**		0.02	U	NA		NA		NA		NA		NA		NA		0.02	U	0.02	U
Zinc	36	**301**		**312**		**47.1**		**45.0**		NA		NA		NA		**46.8**		**201**		**59**	
Perchlorate	<24.5	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Cyanide	5.2	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Butyltins																					
Monobutyltin	--																				
Dibutyltin	--																				
Tributyltin	0.072																				
Tetrabutyltin	--																				
PCBs Aroclors																					
Aroclor 1016	0.96	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1221	0.034	0.39	U	0.39	U	NA		NA		NA		NA		NA		NA		0.39	U	0.39	U
Aroclor 1232	0.034	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1242	0.034	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1248	0.034	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1254	0.033	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1260	0.034	0.2	U	0.2	U	NA		NA		NA		NA		NA		NA		0.2	U	0.2	U
Aroclor 1262	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Aroclor 1268	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Total PCBs	0.000064	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB Congeners	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
All 209 PCB congener target analytes	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4'-TCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,4,4',5-TCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4'-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2',3,4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5-PeCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3',4,4',5,5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
3,3',4,4',5,5'-HxCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
2,3,3',4,4',5,5'-HpCB	--	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Oxygen-Containing Compounds																					
Benzoic Acid	42	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Benzyl Alcohol	8.6	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Dibenzofuran	3.7	**0.011**		0.019	U					**0.13**		**0.11**		**0.11**	J	0.01	U	0.013	Ui	0.02	U
Isophorone	71																				

	SLV for Portland Harbor[2]	S-3W		S-3W		S-4W	S-4W Duplicate	S-4W		S-4W Duplicate		S-4W		S-4W		S-4W		S-4W	
		05/02/07		11/12/07		12/15/00	12/15/00	02/15/01		02/15/01		04/09/02		04/07/05		05/02/07		11/12/07	
Units		µg/L		µg/L		µg/L	µg/L	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Phenols and Substituted Phenols																			
Phenol	2560	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2-Methylphenol (o-Cresol)	13	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
4-Methylphenol (p-Cresol)	180	0.48	U	0.49	U			**0.2**	J	**0.2**	J	0.051	U	0.051	U	0.48	U	0.47	U
2,4-Dimethylphenol	730	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2-Chlorophenol	30	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2,4-Dichlorophenol	110	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2,4,5-Trichlorophenol	3600	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2,4,6-trichlorophenol	2.4	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2,3,4,6-Tetrachlorophenol	1,100	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
Pentachlorophenol	0.56	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
4-Chloro-3-methylphenol		NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2-Nitrophenol	150	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
4-Nitrophenol	150	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
2,4-Dinitrophenol	73	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
Methyl-4,6-Dinitrophenol 2-	150	NA		NA		NA	NA	NA		NA		NA		NA		NA		NA	
Phthalate Esters																			
Dimethylphthalate	3	**0.32**		**0.46**		NA	NA	NA		NA		NA		NA		**0.29**		**0.25**	
Diethylphthalate	3	0.20	U	**0.22**		NA	NA	NA		NA		NA		NA		0.20	U	**0.26**	
Di-n-butylphthalate	3	0.20	U	0.20	U	NA	NA	NA		NA		NA		NA		0.20	U	0.19	U
Butylbenzylphthalate	3	0.20	U	0.20	U	NA	NA	**0.05**	J	**0.04**	J	**0.14**	J	**0.10**	J	0.20	U	0.19	U
Di-n-octylphthalate	3	0.20	U	0.20	U	NA	NA	0.95	U	0.96	U	0.032	U	0.032	U	0.20	U	0.19	U
bis(2-Ethylhexyl)phthalate	2.2	0.96	U	**2.40**		NA	NA	NA		NA		NA		NA		0.96	U	0.94	U
Polycyclic Aromatic Hydrocarbons																			
Naphthalene	0.2	**0.0087**		0.0190	U	NA	NA	**0.04**	J	**0.04**	J	0.012	U	0.012	U	0.017	Ui	0.02	U
2-Methylnaphthalene	0.2	0.0077	U	0.0190	U	NA	NA	**0.09**	J	**0.10**		0.012	U	0.012	U	**0.014**		0.02	U
Acenaphthylene	0.2	0.0082	Ui	0.0190	U	NA	NA	0.10	U	0.10	U	0.011	U	0.011	U	0.0077	U	0.02	U
Acenaphthene	0.2	0.0077	U	0.0190	U	NA	NA	**0.14**		**0.12**		**0.085**	J	0.009	U	0.0077	U	0.02	U
Fluorene	0.2	**0.0084**		0.0190	U	NA	NA	**0.36**		**0.34**		**0.170**	J	0.012	U	0.0077	U	0.02	U
Phenanthrene	0.2	**0.024**		**0.0290**		NA	NA	**0.46**		**0.35**		**0.073**	J	**0.032**	J	0.033	Ui	0.02	U
Anthracene	0.2	0.0077	U	0.0190	U	NA	NA	**0.02**	J	**0.01**	J	0.015	U	0.015	U	0.0077	U	0.02	U
Fluoranthene	0.2	**0.016**		**0.021**		NA	NA	**0.06**	J	**0.05**	J	0.01	U	0.01	U	**0.053**		0.020	U
Pyrene	0.2	**0.017**		0.019	U	NA	NA	**0.19**		**0.16**		**0.10**	J	**0.10**	J	**0.078**		**0.033**	
Benzo(a)anthracene	0.018	0.0077	U	0.019	U	NA	NA	**0.03**	J	**0.02**	J	0.012	U	0.012	U	**0.012**		0.02	U
Chrysene	0.018	**0.0085**		0.019	U	NA	NA	**0.12**		**0.09**	J	0.014	U	0.014	U	**0.030**		0.02	U
Benzo(b)fluoranthene	0.018	0.0077	U	0.019	U	NA	NA	**0.03**	J	**0.03**	J	0.020	U	0.020	U	**0.034**		0.02	U
Benzo(k)fluoranthene	0.018	0.0077	U	0.019	U	NA	NA	**0.02**	J	**0.01**	J	0.020	U	0.020	U	0.0077	U	0.02	U
Benzo(a)pyrene	0.018	0.0077	U	0.019	U	NA	NA	**0.03**	J	**0.02**	J	0.016	U	0.016	U	**0.017**		0.02	U
Indeno(1,2,3-cd)pyrene	0.018	0.0077	U	0.019	U	NA	NA	**0.02**	J	**0.02**	J	0.024	U	0.024	U	**0.020**		0.02	U
Dibenz(a,h)anthracene	0.018	0.0077	U	0.019	U	NA	NA	**0.009**	J	**0.008**	J	0.031	U	0.031	U	0.0077	U	0.02	U
Benzo(g,h,i)perylene	0.2	0.0077	U	0.019	U	NA	NA	**0.04**	J	**0.03**	J	0.017	U	0.017	U	**0.027**		0.02	U
Chlorinated Dioxins and Furans																			
2,3,7,8,-TCDD (Toxicity Equivalence Quotient)	5.1E-09																		
2,3,7,8,-TCDD	5.1E-09																		
2,3,7,8,-TCDF	--																		
1,2,3,7,8,-PeCDD	--																		
1,2,3,7,8,-PeCDF	--																		
2,3,4,7,8,-PeCDF	--																		
2,3,4,7,8,-PeCDF	--																		
1,2,3,6,7,8,-HxCDD	--																		
1,2,3,7,8,9,-HxCDD	--																		
1,2,3,4,7,8,-HxCDF	--																		
1,2,3,6,7,8,-HxCDF	--																		
1,2,3,7,8,9,-HxCDF	--																		
2,3,4,6,7,8,-HxCDF	--																		
1,2,3,4,6,7,8,-HpCDD	--																		
1,2,3,4,6,7,8,-HpCDF	--																		
1,2,3,4,7,8,9,-HpCDF	--																		
OCDD	--																		
OCDF	--																		
Total tetrachlorinated dioxins	--																		
Total pentachlorinated dioxins	--																		
Total hexachlorinated dioxins	--																		
Total heptachlorinated dioxins	--																		
Total tetrachlorinated furans	--																		
Total pentachlorinated furans	--																		
Total hexachlorinated furans	--																		
Total heptachlorinated furans	--																		
Other Analytes																			
TPH Diesel	--	**290**	Z	**290**	Y	NA	NA	**280**	Z	**300**	Z	**1,300**	F	**440**	Y	**1,000**	Z	**740**	Y
TPH Heavy Oil	--	500	U	500	U	NA	NA	250	U	250	U	**550**	O	**340**	L	**940**	Z	500	U
TPH-Gx	--	250	U	250	U	NA	NA	**270**	Z	**260**	Z	**220**	H	100	U	250	U	250	U
Total Organic Carbon	--																		
Total Suspended Solids	--																		

[1]At Portland Harbor sites, drinking water MCLs and PRGs are also
[2]The source of each SLV is

Oregon
Theodore Kulongoski, Governor

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May 1, 2007

Mr. Ted McCall
McCall Oil and Chemical Corporation
5480 NW Front Avenue
Portland, Oregon 97210

RE: Remedial Investigation Report
McCall Oil Site
ECSI No. 134

Dear Mr. McCall:

Thank you for submitting the July 2004 *Draft Remedial Investigation (RI) Report* for the McCall Oil Site. The Department of Environmental Quality (DEQ) reviewed the report and has the following comments. These comments were delayed due to the assumption that the stormwater evaluation, which is still incomplete, would have been finished earlier. On April 16, 2007 the DEQ approved a stormwater sampling work plan, and the resulting stormwater data and evaluation should be incorporated into or amended to the final RI. Per your recent request, the DEQ is providing comments on the RI prior to completion of the stormwater evaluation.

General Comments

The screening of groundwater, surface water, and catch basin sediment was conducted using the draft EPA/DEQ Joint Source Control Strategy (JSCS) for Portland Harbor available in 2004. The source control strategy has been updated and revised. The current December 2005 strategy (www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/jointsource.htm) should be used in the revision of the RI report. Note that DEQ is in the process of updating Table 3-1 of the JSCS to include screening values from DEQ's recent Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment (www.deq.state.or.us/lq/pubs/docs/cu/GuidanceAssessingBioaccumulative.pdf), and the switch from EPA Region 9 preliminary remediation goals to EPA Region 6 screening values (www.deq.state.or.us/lq/cu/health.htm). The new values should be used with our existing JSCS guidance.

The main differences from the draft to the current JSCS include the use of chronic ambient water quality criteria (AWQC) for ecological receptors, and water consumption and fish ingestion for humans.

Specific Comments

Section 1.2 Conclusions based on exceedances of complete pathways to the Willamette River using prior screening level values should be adjusted in this section and throughout the RI based on comparison to current DEQ Joint Source Control Strategy (JSCS) levels; see comments on screening tables. Please contact Mike Poulsen at the DEQ (503-229-6773) concerning appropriate screening levels.

Sections 1.3.2 and 5.2 Please clarify why a risk assessment would not be conducted as part of the existing Voluntary Agreement, as risk assessments are typically conducted as part of the RI. The DEQ would prefer to use the existing Agreement to complete the risk assessment.

Section 1.3.3 Bioaccumulation screening of potential upland source should be conducted according to the JSCS and the DEQ's January 31, 2007 *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment.*

Section 3.4.1 In addition to potential sediment exposure to workers cleaning out stormwater catch basins, there is also a potentially complete exposure pathway between catch basin sediment and Willamette River ecological receptors. Also, there is a potentially complete pathway between river sediment and fishers.

Section 3.4.2 Adjacent in-water sediment data is not the only basis for establishing site contaminants of interest. Current and historical site operations and existing monitoring data should also be included. Please clarify that the list of site constituents of interest is complete.

Section 4.4.2.2

- Concentration units should be added to Appendix D trend plots.
- Please add figures showing soil and groundwater plumes that exceed screening levels.
- Please expand the discussion concerning potential on and off-site sources of volatile organic compounds detected in groundwater monitoring well MW-10.
- Please discuss and interpret results of the most recent metals analyses in groundwater. There appears to be areas of dissolved arsenic elevated above background levels.

Section 4.5 This section will be amended with the results of the current stormwater evaluation, including a figure showing stormwater drainage basins, flow directions, and discharge points and other items in the DEQ's March 5, 2007 comment letter.

Section 4.5.1

- Please clarify whether NPDES sampling is conducted weekly at Outfall S-4, and provide sampling results.
- The DEQ understands that a new filter system was installed in the large vault prior to Outfall S-3; please describe this new feature and document its effectiveness.
- Please discuss how stormwater and catch basin sediment data over time shows the effectiveness of stormwater best management practices implemented at the site.

Section 4.6.1 and Table 13

- Shoreline groundwater well data should be screened against JSCS values and conclusions should be revised accordingly.
- Groundwater contaminants were screened for current site uses but should also consider likely future uses of the site (e.g., groundwater vapors entering a new building constructed on site).

Section 4.6.2 Please clarify that soil constituents left in place during the wood treating chemical source area removal are below applicable screening levels.

Section 4.6.3 and Table 10 The current EPA/DEQ Joint Source Control Strategy for Portland Harbor should be used for screening stormwater (including ecological effects) and conclusions should be revised accordingly. Final AWQC are not available for PAHs, so McCall Oil proposed screening values based on other work by EPA (2003). These screening values can be used on an interim basis; note that a similar approach is included in the Comprehensive Round 2 Site Characterization Summary and Data Gaps Report for the Portland Harbor site. However, EPA and other agencies are in the process of reviewing the use of water screening values for PAHs. A decision on the use of water screening values for PAHs is expected in the next few months. For consistency, we will likely require that the same values be applied to the McCall site.

Screening of catch basin sediment should include ecological effects.

Sections 4.7 and 5.1 Adjust COPCs to reflect revised data screening, including groundwater, stormwater, catch basin sediment, and erodible soil that may be migrating to the Willamette River.

Section 5 This section should also address potential Portland Harbor-related data gaps based on the revised screening against JSCS values.

Table 5 The designation of "> Saturation" for some of the RBCs should be "> Solubility."

Tables 6 and 7

- The designation of "> Saturation" for some of the RBCs should be "> Solubility." At the time of the draft report in 2004, default RBCs were not available from DEQ for some of the chemicals. DEQ now has RBCs available for most chemicals (see http://www.deq.state.or.us/lq/rbdm.htm). For chemicals without RBCs, the RBCs can be calculated using DEQ's Risk-Based Decision Making spreadsheet.
- PAHs and SVOCs were screened using RBCs for pathways of volatilization to outdoor air, vapor intrusion to indoor air, and excavation worker (Table 6). However, VOCs should also be screened for the excavation worker pathway. Other criteria from the JSCS should be included.
- These tables list only screening criteria for human health. Screening should be done for potential ecological effects.

Table 11 Some of the RBCs are indicated as "> Sat." An RBC for direct contact is still relevant, however, and should be noted even if the value is also noted to be above a saturation limit. This will not alter any of the conclusions drawn from this table.

Table 12 Regional background values can be referenced from DEQ's memorandum on default background concentrations for metals (28 October 2002). This does not alter the values presented.

Tables 13 and 14 The approach used by DEQ is to initially screen using total concentrations of metals, not dissolved concentrations. The screening criteria in the JSCS should be used. See the comment on Section 4.6.3 regarding the proposed PAH screening values for PAHs.

Figures 7 and 8 See the DEQ's July 30, 2003 RI comments on using average groundwater concentrations.

Next Steps

Please provide a response to these comments by June 11, 2007. The final RI submittal schedule will consider the status of the stormwater pathway evaluation. Please call me at (503) 229-5326 to discuss the requested submittals or if you have any questions.

Sincerely,

Tom Gainer, P.E.
Project Manager
Portland Harbor Section

cc: Mike Poulsen, DEQ NWR
John Edwards, Anchor Environmental

Oregon
Theodore Kulongoski, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
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TTY (503) 229-5471

April 16, 2007 *Also sent by e-mail*

Mr. Ted McCall
McCall Oil and Chemical Corporation
5480 NW Front Avenue
Portland, Oregon 97210

RE: Stormwater Plan Approval
McCall Oil Site
ECSI No. 134

Dear Mr. McCall:

The Department of Environmental Quality (DEQ) reviewed your April 9, 2007 response to comments on the February 2, 2007 *Stormwater and Catch Basin Sediment Sampling Plan* (Plan) for the McCall Oil and Chemical Site. In the interest of collecting stormwater samples during this wet-weather season, the DEQ accepts your Plan as amended with your April 9, 2007 responses. The DEQ understands that you will implement the Plan this week, collecting stormwater samples in April and May, 2007. You are correct in assuming that the following evaluations should be done concurrently with stormwater and catch basin sampling: 1) potential groundwater impacts to the stormwater conveyance system, and 2) erodible bank soil migration to the Willamette River.

The lack of a timely response to the DEQ's March 5, 2007 General Comment #2 concerning a site-wide stormwater drainage plan means that the adequacy of sampling points (particularly along Front Ave.) will be evaluated after implementation of the Plan. Although the DEQ has accepted your proposal to proceed in this manner, stormwater from areas of concern that are not included in the Plan may require sampling at a later date.

Please call me at (503) 229-5326 if you have questions.

Sincerely,

Tom Gainer, P.E.
Project Manager
Portland Harbor Section

cc: John Edwards, Anchor Environmental
Linda Scheffler, BES
Karen Tarnow, DEQ NWR

030162-01

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, Oregon 97224
Phone 503.670.1108
Fax 503.670.1128

April 9, 2007

Tom Gainer, P.E.
Project Manager
Portland Harbor Section
Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Stormwater Plan
McCall Oil Site
ECSI No. 134

Dear Mr. Gainer:

A meeting was held on April 2, 2007 at your office to discuss the February 2, 2007 Stormwater and Catch Basin Sediment Sampling Plan for the above referenced Site. Thanks again for taking the time to discuss the stormwater issues. The Site is currently occupied by the McCall Oil Terminal/Asphalt Plant and the Brenntag Facility. The Brenntag property is owned by McCall, but McCall does not own or operate the Brenntag Facility. The meeting was attended by you, Jim Anderson, Ted McCall, and John Edwards. At the conclusion of the meeting we were asked to provide a written response to DEQ's March 5, 2007 letter that contains comments on the February 2 plan.

This letter provides each of DEQ's General and Specific Comments from the March 5 letter. Each comment is followed by a written response in bold and italics font.

General Comments

1. Since the initial stormwater evaluation at the subject site conducted between 2000-2005 as part of the Remedial Investigation (RI), the DEQ issued the Portland Harbor *Joint Source Control Strategy* (JSCS, 12/05) that details how the stormwater pathway should be evaluated at Portland Harbor sites. In addition, the DEQ is working together with the City of Portland Bureau of Environmental Services (BES) in evaluating the stormwater pathway at Portland Harbor sites that discharge into the City's conveyance system; BES comments are included in this letter. Therefore, there are additional stormwater evaluation requirements and additional parties involved since the previous RI sampling activities, and the stormwater plan needs to better explain and justify the proposed sampling locations and analytes.

no response required

2. Please provide a comprehensive stormwater drainage map for the entire facility that delineates all stormwater drainage basins and shows all catch basins, piped and non-piped conveyance systems (with flow directions), and outfalls. This information and the rationale for each proposed sampling location are needed to evaluate whether sampling locations are representative of site runoff.

Four catch basins have been sampled during the RI, as approved by DEQ in the RI workplan, and we believe those catch basins are still representative of facility runoff. Ted McCall is going to provide DEQ with the current Stormwater Pollution Control Plans for the Brenntag (former Quadra) and McCall Terminal facilities.

We could provide a comprehensive stormwater drainage map as requested. However, no such updated map exists. To comply with DEQ's latest request, we would have to prepare a new map by reviewing and combining current maps from the McCall and Brenntag facilities.

Considering the time that would likely be required to prepare a new map with sampling rationale, and time for DEQ and BES to review the information; we would likely not get through the process until sometime in May, thereby missing much of the Spring 2007 sampling period.

Our suggestion is for DEQ to accept the four current stormwater sampling locations, which were previously approved in the RI workplan, and have already been sampled three times during the RI.

That way we can move ahead with an April stormwater sampling run.

3. Based on: 1) the multiple types of chemicals stored, packaged, and distributed at the Brenntag facility; 2) requirements described in the JSCS and subsequent fact sheets (see: http://www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/stormwater.htm, including analyses for polychlorinated biphenyls (PCBs) and phthalates at all Portland Harbor site); and 3) constituents identified in the LWG Round 2 Data Report in the Outfall 22 draft initial area of potential concern (PCBs and pesticides), the full suite of semi-volatile organics (including all phthalates), metals (including manganese, mercury, nickel, and silver) and pesticides should be added to the analyte list for stormwater and catch basin samples.

We will add the full list of phthalates and the following metals; manganese, mercury, nickel, and silver. We do not plan to add the full semi-voc analyte list, or pesticides. PCBs were already in our workplan.

4. Please evaluate the potential for groundwater contamination to enter City storm water pipes and/or preferentially flow along more permeable backfill material. The first level of evaluation should include a comparison of seasonal groundwater elevations compared to the pipe elevations.

We will do an evaluation of the potential for groundwater to enter the City stormsewers, although we presume you do not want the stormwater sampling to be delayed while that evaluation is conducted. The evaluation will consist of an assessment of the location of the deep stormsewers, the depth to groundwater, and groundwater flow direction.

Specific Comments

Stormwater Sampling

5. The proposed plan includes two rounds of stormwater sampling (on page 1) instead of the four rounds prescribed in the JSCS; the plan indicates fours rounds on page 3. It is not clear how or if the existing data will be used in the stormwater evaluation considering the expanded analyte list and JSCS requirements. Considering our late start within the current rainy season, the DEQ recommends collecting samples monthly starting in March 2007 and continuing until the dry season or four sample rounds have been conducted.

Assuming that we get timely approval of this plan revision, we will attempt to conduct two stormwater sampling rounds, one in April, and one in May, 2007.

6. Please conduct TSS analyses on storm water samples.

We will add TSS to our testing plan.

7. Evaluate potential overland stormwater flow with direct discharge to the Willamette River (i.e., over the bank; in the vicinity of GP-14, for example) in areas where surface soil constituents exceed JSCS erodible soil screening levels (PECs).

We will evaluate the potential for a complete pathway of soil erosion to the Willamette River. This will be a mapping of potentially erosive soil conditions in areas where runoff could enter the Willamette, if any such areas exist. We presume DEQ does not want the sampling of stormwater catch basins to be delayed while this work is carried out.

Catch Basin Sediment Sampling

If insufficient sediment is available in the bottom of a particular catch basin (the preferred sampling location), then a sediment sample should be collected from the catch basin filter. Pre-sampling photographs of the catch basins and filters should be taken to support this.

We will temporarily remove the particulate filters from the three target catch basins, S-1, S-2, and S-3. If the catch basins contain no sediment, which is expected, we will check the filters to see if there is enough recoverable sediment accumulated on the filters to allow sampling. Station S-4 is an oil water separator and does not use a particulate filter, although the catch basins that feed the oil water separator have filters on them. The final chamber of the oil water separator at S-4 will be checked for sediment, and sampled if present.

Reporting

8. Stormwater and sediment analytical results should be compared to appropriate JSCS screening levels, which form the basis for evaluating the need for source control actions. Analyte reporting limits should be less than the JSCS screening levels to the extent practically achieved by the lab.

We will screen the data against the JSCS criteria as described by DEQ.

Please approve this letter so that we may plan our April and May, 2007 stormwater sampling events. Feel free to contact me to discuss this letter.

Respectfully Submitted,

John E. Edwards, RG, CEG
Anchor Environmental, L.L.C.

Cc: Ted McCall
John Renda

Oregon
Theodore Kulongoski, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
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March 5, 2007 *Also sent by e-mail*

Mr. Ted McCall
McCall Oil and Chemical Corporation
5480 NW Front Avenue
Portland, Oregon 97210

RE: Stormwater Plan
McCall Oil Site
ECSI No. 134

Dear Mr. McCall:

The Department of Environmental Quality (DEQ) reviewed the February 2, 2007 *Stormwater and Catch Basin Sediment Sampling Plan* for the McCall Oil and Chemical Site and has the following comments.

General Comments

1. Since the initial stormwater evaluation at the subject site conducted between 2000-2005 as part of the Remedial Investigation (RI), the DEQ issued the Portland Harbor *Joint Source Control Strategy* (JSCS, 12/05) that details how the stormwater pathway should be evaluated at Portland Harbor sites. In addition, the DEQ is working together with the City of Portland Bureau of Environmental Services (BES) in evaluating the stormwater pathway at Portland Harbor sites that discharge into the City's conveyance system; BES comments are included in this letter. Therefore, there are additional stormwater evaluation requirements and additional parties involved since the previous RI sampling activities, and the stormwater plan needs to better explain and justify the proposed sampling locations and analytes.

2. Please provide a comprehensive stormwater drainage map for the entire facility that delineates all stormwater drainage basins and shows all catch basins, piped and non-piped conveyance systems (with flow directions), and outfalls. This information and the rationale for each proposed sampling location are needed to evaluate whether sampling locations are representative of site runoff.

3. Based on: 1) the multiple types of chemicals stored, packaged, and distributed at the Brenntag facility; 2) requirements described in the JSCS and subsequent fact sheets (see: http://www.deq.state.or.us/lq/cu/nwr/PortlandHarbor/stormwater.htm, including analyses for polychlorinated biphenyls (PCBs) and phthalates at all Portland Harbor site); and 3) constituents identified in the LWG Round 2 Data Report in the Outfall 22 draft initial area of potential concern (PCBs and pesticides), the full suite of semi-volatile organics (including all

phthalates), metals (including manganese, mercury, nickel, and silver) and pesticides should be added to the analyte list for stormwater and catch basin samples.

4. Please evaluate the potential for groundwater contamination to enter City storm water pipes and/or preferentially flow along more permeable backfill material. The first level of evaluation should include a comparison of seasonal groundwater elevations compared to the pipe elevations.

Specific Comments

Stormwater Sampling

5. The proposed plan includes two rounds of stormwater sampling (on page 1) instead of the four rounds prescribed in the JSCS; the plan indicates fours rounds on page 3. It is not clear how or if the existing data will be used in the stormwater evaluation considering the expanded analyte list and JSCS requirements. Considering our late start within the current rainy season, the DEQ recommends collecting samples monthly starting in March 2007 and continuing until the dry season or four sample rounds have been conducted.

6. Please conduct TSS analyses on storm water samples.

7. Evaluate potential overland stormwater flow with direct discharge to the Willamette River (i.e., over the bank; in the vicinity of GP-14, for example) in areas where surface soil constituents exceed JSCS erodible soil screening levels (PECs).

Catch Basin Sediment Sampling

8. If insufficient sediment is available in the bottom of a particular catch basin (the preferred sampling location), then a sediment sample should be collected from the catch basin filter. Pre-sampling photographs of the catch basins and filters should be taken to support this.

Reporting

9. Stormwater and sediment analytical results should be compared to appropriate JSCS screening levels, which form the basis for evaluating the need for source control actions. Analyte reporting limits should be less than the JSCS screening levels to the extent practically achieved by the lab.

Please submit a revised stormwater plan that addresses these comments by March 23, 2007 and plan to collect your first samples by the end of March. Please call me at (503) 229-5326 if you have questions.

Sincerely,

Tom Gainer, P.E.
Project Manager
Portland Harbor Section

cc: John Edwards, Anchor Environmental
Linda Scheffler, BES
Karen Tarnow, DEQ NWR

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
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Phone 503.670.1108
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February 2, 2007
030162-01

Mr. Tom Gainer, P.E.
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Stormwater and Catch Basin Sediment Sampling Plan, McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Tom:

This sampling plan is designed to further assess stormwater and catch basin sediment quality at the McCall Oil and Chemical site in Portland, Oregon (Figure 1). This plan is consistent with DEQ's December 2005 Joint Source Control Strategy (JSCS) document. The site includes both the McCall Terminal and the Brenntag facility. Brenntag currently operates the portions of the site formerly managed by Quadra Chemical and was occupied by Great Western Chemical at the time of the time of the Remedial Investigation (RI) Workplan (IT Corporation, November 2000).

Stormwater Sampling

Consistent with the JSCS document, storm water samples will be collected from the four locations identified in the RI Workplan (S-1 through S-4) as shown on Figure 2. Locations S-1, S-2, and S-3 are associated with the Brenntag facility and S-4 is associated with the McCall Terminal. Sampling procedures will be consistent with the RI Workplan and the December 2002 (rev. 1/05) Washington Department of Ecology Storm Water Sampling Guidance. Two rounds of stormwater sampling are proposed; one sample will be representative of first flush samples (within 30 minutes of stormwater discharge) and one sample representative of a normal storm event. Samples will be collected during the first and second quarters 2007.

In addition to the analyte list presented in the RI Workplan, the samples will be laboratory tested for polychlorinated biphenyls (PCBs). PCB testing is being included at the request of DEQ, there are no known sources of PCBs at the Site. Below is the analyte list for stormwater sampling.

- Polynuclear Aromatic Hydrocarbons (PAHs) by EPA method 8270-LL
- 4-Methylphenol by EPA method 8270-LL
- Butylbenzylphthalate by EPA method 8270-LL
- Di-n-octylphthalate by EPA method 8270-LL

- Dibenzofuran by EPA method 8270-LL
- Diesel Range Petroleum Hydrocarbons by method NWTPH-Dx
- Gasoline Range Hydrocarbons by method NWTPH-Dx
- Total and Dissolved Metals (As, Cu, Cr, Cd, Pb, and Zn) by EPA method 200.8 ICP/MS
- PCB by EPA method 8082

Catch Basin Sediment Sampling

The plan includes one round of catch basin sediment sampling. The catch basins (S-1, S-2, and S-3) are equipped with particulate filters so sediment is not likely to be present. Anchor will open each catch basin and remove the particulate filters. If sediment is present, a sample will be collected and analyzed as indicated below. Location S-4 is at the McCall Terminal oil/water separator. A sediment sample will be collected if sediment is present in the chamber immediately upgradient of the discharge pipe. The sample locations will be checked during each stormwater sampling event; however, sediment, if present, will only be collected and analyzed once. As with the stormwater, in addition to the analyte list presented in the RI Workplan, the samples will be laboratory tested for PCBs. Below is the analyte list for catch basin sediment sampling.

- PAHs by EPA method 8270-LL
- 4-Methylphenol by EPA method 8270-LL
- Butylbenzylphthalate by EPA method 8270-LL
- Di-n-octylphthalate by EPA method 8270-LL
- Dibenzofuran by EPA method 8270-LL
- Diesel Range Petroleum Hydrocarbons by method NWTPH-Dx
- Gasoline Range Hydrocarbons by method NWTPH-Dx
- Total Metals (As, Cu, Cr, Cd, Pb, and Zn) by EPA method 200.8 ICP/MS
- Total Organic Carbon by EPA method 9060A
- PCB by EPA method 8082

Reporting

Results of the stormwater and catch basin sediment samples will be included in the quarterly progress reports. The reports will include the following items:

- Map of Sampling Locations
- Rain Gage Data from Yeon Gage #121
- Deviations from Field Sampling Plan, if any
- Tabulated Laboratory Analytical Results
- Laboratory Data Validation Report

After completion of the four rounds of sampling the quarterly report will additionally include:

- Interpretation of data
- Screening of data against relevant criteria
- Conclusions and recommendations

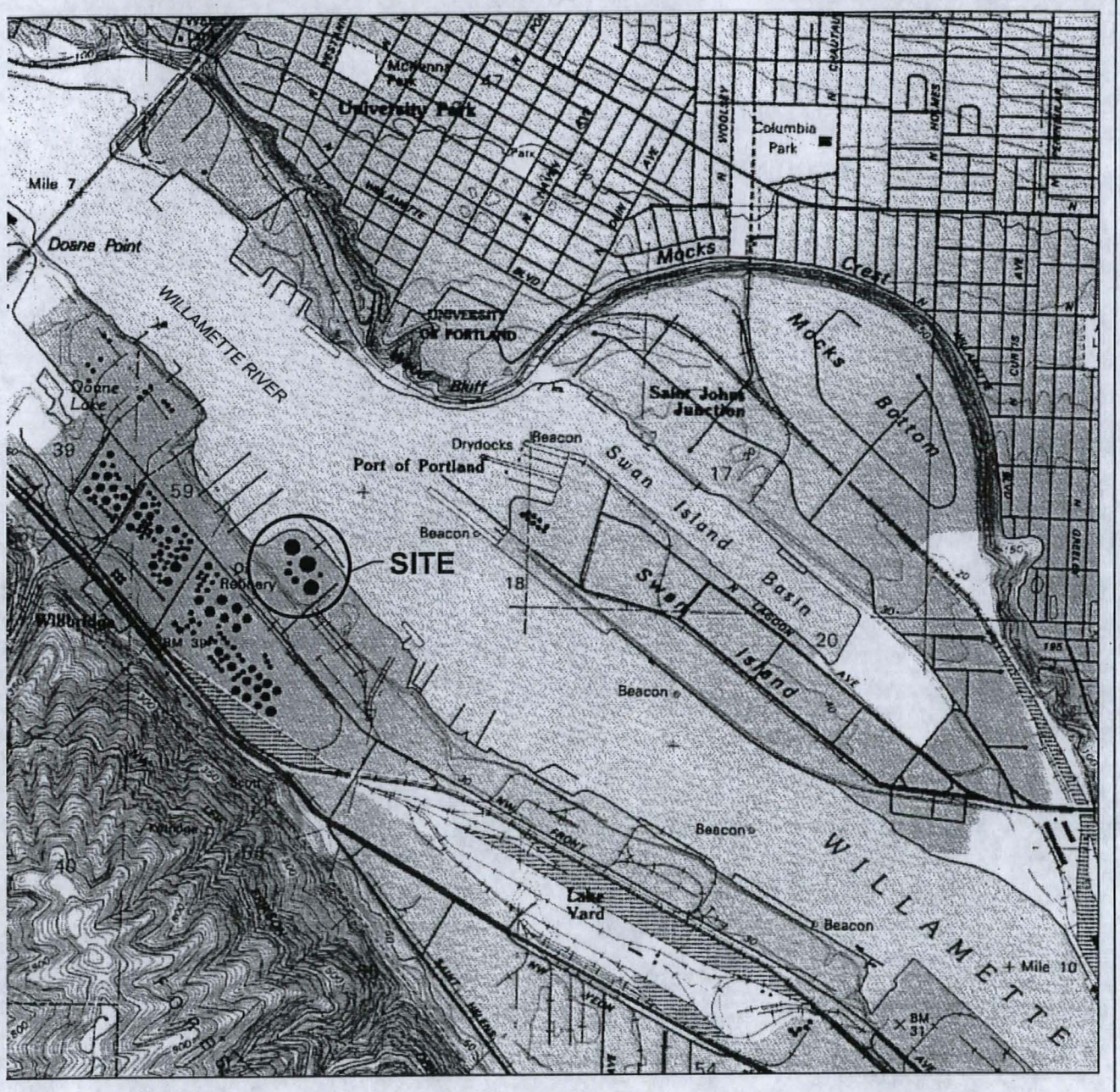
Anchor is prepared to begin sampling upon approval of this sampling plan. If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.

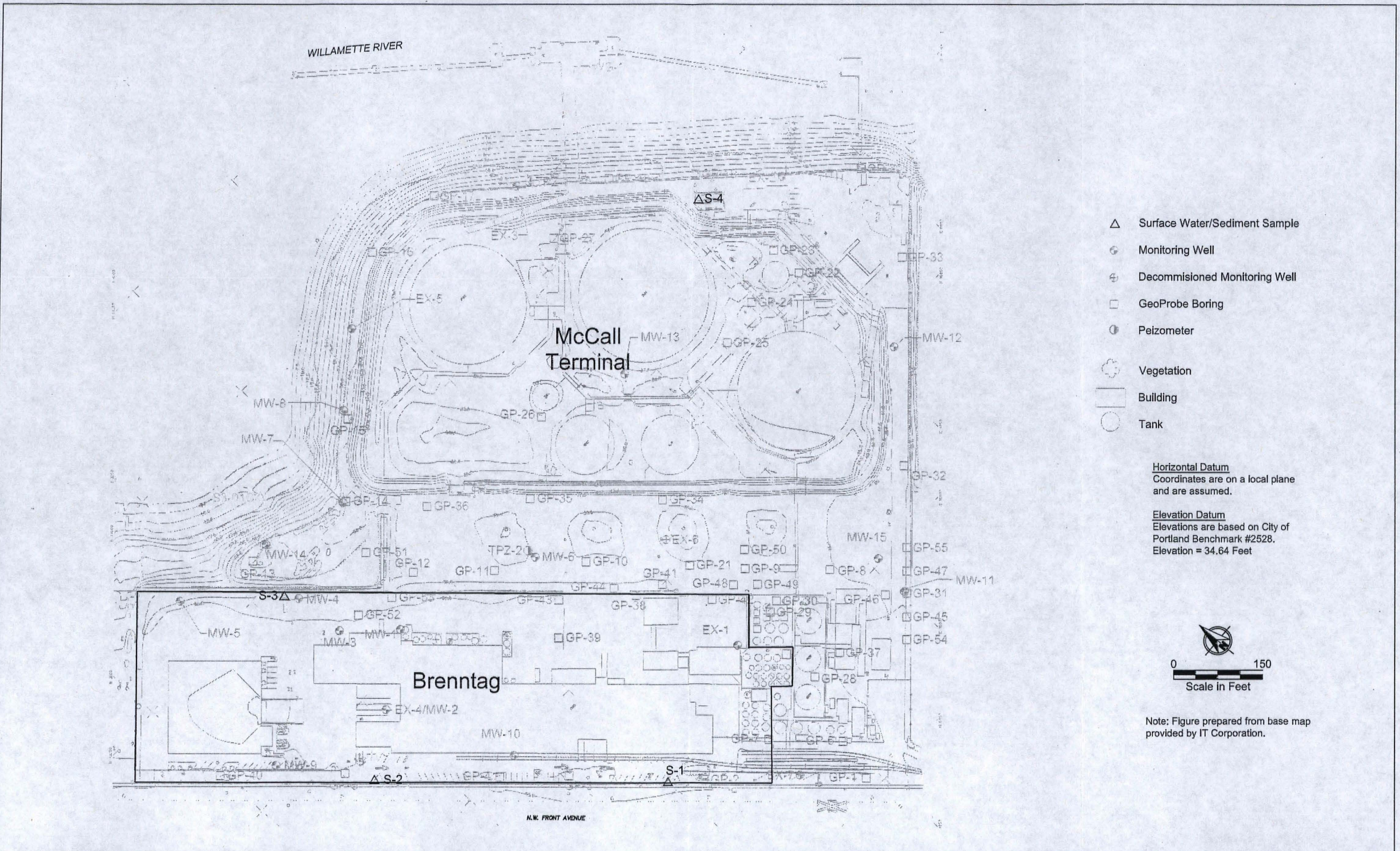
Cc: Ted McCall; McCall Oil and Chemical



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030162-McCall_Portland\030162011030162011-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical



ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Stormwater Sample Location Map
McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

nchor Environmental, L.L.C.
1423 Third Avenue, Suite 300
Seattle, WA 98101-2177
Phone 206.287.9130
Fax 206.287.9131

September 29, 2006
030162-01

Tom Gainer, PE
Oregon DEQ
2020 SW Fourth Avenue
Suite 400
Portland, Oregon 98201-4987

Re: Transmittal of Report: Assessment of McCall Oil and Chemical Site Impacts to The Willamette River, Portland, Oregon

Dear Mr. Gainer:

The enclosed report provides a comprehensive source control evaluation of the McCall Oil and Chemical Site. The assessment follows the guidelines of the DEQ Joint Source Control Strategy in screening potential pathways to the Willamette River. The report also incorporates the bulk sediment chemistry and bioassay test findings obtained by the Lower Willamette Group adjacent to the McCall shoreline.

DEQ has asked McCall to conduct further assessment of the stormwater pathway. The findings of this report indicate that adjacent river sediment is not impacted by historic stormwater discharges, and that COI concentrations in stormwater are below chronic water quality criteria or below background concentrations. Further investigation of the stormwater pathway does not therefore appear to be necessary.

Please contact me if you wish to discuss this report.

Respectfully Submitted,

John E. Edwards, RG, CEG
Anchor Environmental, L.L.C.

Cc: Ted McCall

Encl: Report: Assessment of McCall Oil and Chemical Site Impacts to the Willamette River (2)

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

April 5, 2005
030162-01

Tom Gainer, PE
Oregon Department of Environmental Quality
2020 SW 4th Ave, Suite 400
Portland, Oregon 97201-4987

Re: Response to February 22, 2005 DEQ Comment Letter, McCall Oil and Chemical Site, Portland, Oregon, ECSI # 134

Dear Tom:

Thanks for meeting with Ted McCall and I on March 28 to discuss the status of the remedial investigation and source control evaluation of the McCall Portland site. This letter addresses the comments in your February 22, 2005 letter on the 4th Quarter 2004 Status Report for the McCall Oil and Chemical site in Portland, Oregon. The site includes both the McCall Terminal and the Quadra Chemical facility.

In the following sections we have reproduced DEQ's General and Specific Comments from the February 22, 2005 letter. The Anchor Environmental LLC (Anchor) response to each DEQ comment is in italics.

DEQ General Comments

Recent storm water data was not included in the *Status Report*. The DEQ requested sampling and analysis of storm water to continue evaluation beyond the two rounds of data (samples from 2000 and 2002) presented in the July 2004 *Draft Remedial Investigation (RI)*. This evaluation would also include the effectiveness of storm water Best Management Practices (BMPs) implemented at the site. If recent storm water samples have not been collected and analyzed, DEQ requests that you collect at least one storm water sample within 30 days from the four locations and using the same analysis that were conducted for the RI.

No storm water samples have been collected since 2002. Anchor will collect storm water samples from the four locations and use the same laboratory testing methods that were conducted for the RI. Samples will be collected during the second quarter 2005, hopefully in April, provided there is sufficient rainfall.

Specific Comments

Table 5 The table's heading identifying chemicals is missing from page 1 of 12. Please provide a corrected page to substitute in the document. Also, please explain the meaning of note "D."

Attached please find Table 5 reproduced in its entirety. The note "D" indicates that the reported result is from a dilution.

Table 9 Concentrations of chromium, copper, lead, and zinc in catch basin S-3 samples collected on November 4, 2004 continue to be elevated above the probable effects concentration ecological screening levels. Please clarify:

- whether the S-3 sampling location was in the catch basin or from within the filter fabric sediment trap.

Sampling location S-3 is not fitted with a fabric filter sediment trap. Bags of wood chips are placed around the S-3 catch basin to reduce the volume of sediment entering the catch basin. The sediment sample was collected directly from the catch basin.

- the frequency, volume, and disposition of sediment removal from the storm water catch basins (including S-3);

The storm water catch basins are cleaned out annually. A copy of the waste manifest from the September 2003 and November 2004 cleaning is attached. In September 2003, 328 gallons of solids were pumped from the catch basins and oil/water separator. Catch basin sediment was disposed of at Oil Re-Refining Company, Portland, Oregon. In November 2004, 1100 gallons of water/sediment were pumped out of the catch basins and disposed of at Oil Re-Refining Company, Portland, Oregon.

- the sediment load from location S-3 that discharges to the Willamette River (i.e., evaluate the amount of sediment that passes any upland sediment traps;

The next stormwater sampling event will include total and dissolved metals and total suspended solids to help evaluate how much sediment (if any) passes to the Willamette River.

- The current status of BMPs in this drainage area and suggestions for improvement

Quadra Chemical (Quadra) BMPs in the drainage area encompassing catch basin S-3 include the following:

Containment: *According to Quadra staff, hazardous materials and process water are used within the confines of the Quadra building. The interior floors are constructed to contain spills within the building. Production and packaging areas are controlled by the closed circuit collection/pre-treatment systems. This system is discharged in batches to the City of Portland sanitary sewer system. Containment is also provided for hazardous material storage in exterior tanks. The acid tank farm is controlled by pretreatment neutralization and is discharged to the City of Portland sanitary sewer system.*

Waste Chemicals & Material Disposal: *Process water used within the Quadra plant area is recycled or pre-treated and then discharged to the City of Portland sanitary sewer system. As a result of this closed circuit system, any spills within the Quadra production building or warehouse are prevented from entering the storm system.*

Covering Activities: *Manufacturing and packaging operations are conducted indoors and within containment. Manifolds and pumps used for solvent in the solvent tank farm are covered to prevent residues from entering the stormwater system.*

Debris Control: *Bags of bark chips are in place around the S-3 catch basin. McCall is currently evaluating reconstruction of the S-3 catch basin to allow for installation of a fabric filter to further prevent sediment from entering the catch basin. Debris and sediment from the catch basin is cleaned out annually.*

Storm water Diversion: *The S-3 catch basin is fitted with a valve shut-off system. If any outside spills in the area of S-3 should occur. The valve can be closed to prevent discharge to the outfall.*

Housekeeping: *Fork lift maintenance is done indoors and vehicle maintenance is done off-site. The paved areas of the plant are swept monthly to control debris. The asphalt drainageway leading to catch basin S-3 is swept several times per year, according to Ted McCall. Spill kits are available where the majority of the outside chemical handling occurs.*

We hope that this letter addresses the issues in the February 22, 2005 letter to your satisfaction. If you have any questions, please contact us.

Respectfully Submitted,

John E. Edwards, RG, CEG
Anchor Environmental, L.L.C.

John J. Renda, RG
Anchor Environmental, L.L.C.

Cc: Ted McCall

RECEIVING RECORD ** No. 3024857

RECEIVED BY: Oil Re-Refining Company
4150 N. Suttle Road
Portland, OR 97217

EPA# WAD980986012
Phone (503) 286-8352
Fax (503) 286-5027

PLANT:PORTLAND
EMPLOYEE:MRB
PAGE: 1

RECEIVED FROM: Foss Environmental
6211 N Ensign St
DATE:09/03/2003 Portland,OR 97217

Customer ID# 3716
Phone:
Driver: BRANDON

QTY.	UNIT	ITEM	MNF	%H2O	%SOLID	B/L#
1.	EACH	Hydro Clor-D-Tect Kit	N	0.%	0.%	0
	GEN:	MCALL OIL. HCDT 0 PPM. PROFILE ON FILE. JOB# 3005-011.				
TOTAL EAC		1.				
328.	GAL.	Oily Solids	N	0.%	%	
	GEN:	MCALL OIL. HCDT 0 PPM. PROFILE ON FILE. JOB# 3005-011.				
2644.	GAL.	Emulsified Oil & Water	N	98.%	%	
	GEN:	MCALL OIL. HCDT 0 PPM. PH 7. PROFILE ON FILE. JOB# 3005-011.				
TOTAL GAL		2972.				

ustomer warrents that the waste petroleum products being received do not ontain any contaminants including, without limitation, pesticides, chlorinated olvents at total concentrations greater than 1000 PPM, PCB's geater than PPM, or any other material classified as hazardous waste by 40 CFR part 261, ubparts C and D (implementing the Federal Resource Conservation and Recovery ct) or by any State or local hazardous waste classification program. Should aboratory tests find this waste product not in compliance with 40 CFR part 61 customer agrees to pay for all disposal costs incurred.

igned X Brandon L Bolen DATE:09/03/2003

** RECEIVING RECORD ** No. 3031234

RECEIVED BY: Oil Re-Refining Company EPA# WAD980986012 PLANT:PORTLAND
4150 N. Suttle Road Phone (503) 286-8352 EMPLOYEE:RL
Portland, OR 97217 Fax (503) 286-5027 PAGE: 1

RECEIVED FROM: Cowlitz Clean Sweep Customer ID# 711
55 International Way Phone: 208-423-8318
DATE:09/23/2004 Longview,WA 98632 Driver: MARK

QTY.	UNIT	ITEM	MNF	%H20	%SOLID	B/L#
1.	EACH	Truck Wash Out	N	0.%	0.%	0
	GEN:	MCCALL OIL PORTLAND.				
		PASSED SNIFFER PH 7.				
TOTAL EAC		1.				
1100.	GAL.	Emulsified Oil & Water	N	98.%	%	
	GEN:	MCCALL OIL PORTLAND				
		PASSED SNIFFER PH 7.				
TOTAL GAL		1100.				

Customer warrents that the waste petroleum products being received do not contain any contaminants including, without limitation, pesticides, chlorinated solvents at total concentrations greater than 1000 PPM, PCB's geater than 2 PPM, or any other material classified as hazardous waste by 40 CFR part 261, Subparts C and D (implementing the Federal Resource Conservation and Recovery Act) or by any State or local hazardous waste classification program. Should laboratory tests find this waste product not in compliance with 40 CFR part 261 customer agrees to pay for all disposal costs incurred.

Signed X Mark Merrill DATE:09/23/2004

EPA ID# WAD988467197 CCB#78140 USDOT 492568

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*-1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis*-1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
EX-1	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	**1.8**		0.5 U	2.0 U	0.5 U	**4.4**	20 U	0.5 U	**9.9**	**5.9**	0.5 U	**240**	0.5 U	0.5 U
EX-1 Duplicate	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	**1.7**		0.5 U	2.0 U	0.5 U	**3.9**	20 U	0.5 U	**8.3**	**5.2**	0.5 U	**270**	0.5 U	0.5 U
EX-1	Water	02/04/99		50 U	50 U	50 U	50 U	50 U	50 U	2000 U	50 U		50 U	200 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	**120**	50 U	50 U
EX-1 Duplicate	Water	02/04/99		50 U	50 U	50 U	50 U	50 U	50 U	2000 U	50 U		50 U	200 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	**130**	50 U	50 U
EX-1	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	**0.53**	20 U	0.5 U	0.5 U	0.5 U	0.5 U	**9.1**	0.5 U	0.5 U
EX-1	Water	03/07/02		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	**3.2** D	100 U	2.5 U	2.5 U	2.5 U	2.5 U	**13** D	2.5 U	2.5 U
EX-1	Water	10/03/02		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	**11**	2.5 U	2.5 U
EX-1	Water	02/11/04		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	**22** D	2.5 U	2.5 U
EX-1 Duplicate	Water	02/11/04		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U		2.5 U	10 U	2.5 U	0.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	**24** D	2.5 U	2.5 U
EX-1	Water	10/22/04		1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U		1.3 U	5.0 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	**4.1** D	1.3 U	1.3 U
EX-2	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/03/99		0.5 U	0.5 U	**0.8**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**1.8**	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/13/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
EX-1	Water	05/02/97	0.5 U	0.5 U	**410**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3300**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1 Duplicate	Water	05/02/97	0.5 U	0.5 U	**470**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3600**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1	Water	02/04/99	50 U	50 U	**220**	50 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	2000 U	50 U	**2600**	50 U	200 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
EX-1 Duplicate	Water	02/04/99	50 U	50 U	**250**	50 U	50 U	50 U	2000 U	50 U	50 U	50 U	50 U	2000 U	50 U	**3000**	50 U	200 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
EX-1	Water	12/20/00	0.5 U	0.5 U	**20**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**400** D	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-1	Water	03/07/02	2.5 U	2.5 U	**32** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**480** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	10/03/02	2.5 U	2.5 U	**25**	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**340** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	02/11/04	2.5 U	2.5 U	**82** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**1700** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1 Duplicate	Water	02/11/04	2.5 U	2.5 U	**89** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**1700** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
EX-1	Water	10/22/04	1.3 U	1.3 U	**19** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**740** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
EX-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-3	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.3**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.65**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.3**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	02/13/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-4/MW-2	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
EX-1	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1 Duplicate	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	02/04/99	200 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	50 U	200 U	50 U	200 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1 Duplicate	Water	02/04/99	200 U	50 U	50 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	50 U	200 U	50 U	200 U	50 U	200 U	200 U	200 U	200 U	200 U
EX-1	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-1	Water	03/07/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/03/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	02/11/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1 Duplicate	Water	02/11/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
EX-1	Water	10/22/04	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
EX-2	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-2	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-3	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	02/13/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-4/MW-2	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*- 1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis*-1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
EX-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		**1.4**	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**1.0**	20 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	02/04/99		0.5 U	0.5 U	**0.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	**0.8**	20 U	0.5 U	**3.8**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	05/02/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	**0.9**		0.5 U	2.0 U	0.5 U	**7.4**	20 U	0.5 U	**0.7**	**12.0**	0.5 U	**8.0**	0.5 U	0.5 U
MW-1	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**2.8**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.53**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**9.7**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**3.6**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**0.58**	20 U	0.5 U	**2.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.87**	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 Duplicate	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	**0.88**	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	05/01/97		0.5 U	0.5 U	**5.9**	0.5 U	**0.5**	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**0.6**	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/04/99		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	12/20/00	5.0 U	0.5 U	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	03/07/02		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3 Duplicate	Water	03/07/02		0.5 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/03/02		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-5	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	05/02/97	0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.7**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-6	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	05/02/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
EX-7	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	05/01/97	0.5 U	0.5 U	**28.0**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**110**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.7**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	12/20/00	0.5 U	0.5 U	**0.56**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.5**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.2**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.9**	0.5 U	0.5 U	20 U	0.5 U	**1.4**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	02/11/04	0.5 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.3**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/22/04	0.5 U	0.5 U	**0.67**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.8**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 Duplicate	Water	10/22/04	0.5 U	0.5 U	**0.65**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.9**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.7 Tota	0.5 U	0.5 U	0.5 U
MW-3	Water	02/04/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3 Duplicate	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
EX-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-5	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-6	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	05/02/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
EX-7	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-1 Duplicate	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/04/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3 Duplicate	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-3	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*- 1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis* -1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-4	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	**3.5**	20 U	0.5 U	**4.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	**0.8**	20 U	0.5 U	**4.4**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	12/20/00	5.0 U	0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	03/07/02		0.5 U	0.5 U	**2.6**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/03/02		0.5 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.59**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	05/01/97		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/03/99		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	12/20/00	5.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Duplicate	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/11/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/25/01		2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	125 U	2.5 U	10 U	50 U	25.0 U	**2.8**	**6.4**	50 U	2.5 U	**422**	2.5 U	2.5 U	**7.45**	2.5 U	2.5 U
MW-6	Water	10/25/01		2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	125 U	2.5 U	10 U	50 U	25.0 U	**2.8**	**6.4**	50 U	2.5 U	**422**	2.5 U	2.5 U	**7.45**	2.5 U	2.5 U
MW-6 Duplicate	Water	10/25/01		2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	125 U	2.5 U	10 U	50 U	25.0 U	**2.6**	**6.9**	50 U	2.5 U	**411**	2.5 U	2.5 U	**7.65**	2.5 U	2.5 U
MW-6	Water	03/08/02		2.5 U	2.5 U	**5.6** D	2.5 U	2.5 U	2.5 U	100 U	**3.8** D		2.5 U	10.0 U	**4.0** D	**11.0** D	100 U	2.5 U	**700** D	2.5 U	2.5 U	**22** D	2.5 U	2.5 U
MW-6	Water	10/03/02		1.3 U	1.3 UJ	**11.0** D	1.3 U	1.3 U	1.3 U	50 U	**2.9** D		1.3 U	5.0 U	**3.8** D	**7.5** D	50 U	1.3 U	**770** D	1.3 U	1.3 U	**7.7** D	1.3 U	1.3 U
MW-6 Duplicate	Water	10/03/02		1.3 U	1.3 UJ	**12.0** D	1.3 U	1.3 U	1.3 U	50 U	**3.0** D		1.3 U	5.0 U	**3.9** D	**7.8** D	50 U	1.3 U	**740** D	1.3 U	1.3 U	**8.0** D	1.3 U	1.3 U
MW-6	Water	02/12/04		1.3 U	1.3 U	**11.0** D	1.3 U	1.3 U	1.3 U	50 U	**2.5** D		1.3 U	5.0 U	**3.6** D	**4.5** D	50 U	1.3 U	**630** D	1.3 U	1.3 U	**7.6** D	1.3 U	1.3 U
MW-6	Water	10/21/04		2.5 U	2.5 U	**14.0** D	2.5 U	2.5 U	2.5 U	100 U	**3.4** D		2.5 U	10.0 U	**4.4** D	**3.8** D	100 U	2.5 U	**780** D	2.5 U	2.5 U	**6.4** D	2.5 U	2.5 U
MW-7	Water	10/25/01		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	2.0 U	10.0 U	5.0 U	0.5 U	0.5 U	10 U	0.5 U	**2.9**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	03/08/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**2.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**2.5**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	02/12/04		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**5.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7 Duplicate	Water	02/12/04		0.5 U	0.5 U	**1.4**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**5.3**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/21/04		0.5 U	0.5 U	**0.78**	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**3.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/25/01		0.5 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	25 U	0.5 U	2.0 U	10.0 U	5.0 U	0.5 U	0.5 U	10 U	0.5 U	**1.21**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	03/07/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.1**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-4	Water	05/01/97	0.5 U	0.5 U	**8.1**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**11.0**	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/03/99	0.5 U	0.5 U	**2.0**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.5**	**1.9**	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	05/01/97	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/03/99	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	12/20/00	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Duplicate	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/11/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/25/01	2.5 U	5 U	**20.5**	2.5 U	2.5 U	2.5 U	50 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	**23**	2.5 U	2.5 U	2.5 U	2.5 U	5 U	10 U	5 U	5 U	2.5 U
MW-6 Duplicate	Water	10/25/01	2.5 U	5 U	**20.6**	2.5 U	2.5 U	2.5 U	50 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	2.5 U	**21.2**	2.5 U	2.5 U	2.5 U	2.5 U	5 U	10 U	5 U	5 U	2.5 U
MW-6	Water	03/08/02	2.5 U	2.5 U	**200** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**360** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-6	Water	10/03/02	1.3 U	1.3 U	**33** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**40** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6 Duplicate	Water	10/03/02	1.3 U	1.3 U	**36** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**43** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6	Water	02/12/04	1.3 U	1.3 U	**71** D	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	**70** D	1.3 U	5.0 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-6	Water	10/21/04	2.5 U	2.5 U	**55** D	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	**62** D	2.5 U	10.0 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-7	Water	10/25/01	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	1.0 U	0.5 U
MW-7	Water	03/08/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**3.4**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**2.4**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7 Duplicate	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/25/01	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	10 U	0.5 U	1.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.0 U	2.0 U	1.0 U	1.0 U	0.5 U
MW-8	Water	03/07/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-4	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-4	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	05/01/97	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/03/99	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	12/20/00	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5 Duplicate	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	02/11/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-5	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-6	Water	10/25/01	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	5.0 U	2.5 U	10.0 U	2.5 U	25 U	2.5 U	25 U	2.5 U	2.5 U	10 U	10 U
MW-6 Duplicate	Water	10/25/01	10.0 U	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U	5.0 U	2.5 U	10.0 U	2.5 U	25 U	2.5 U	25 U	2.5 U	2.5 U	10 U	10 U
MW-6	Water	03/08/02	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-6	Water	10/03/02	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6 Duplicate	Water	10/03/02	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	02/12/04	5.0 U	1.3 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	1.3 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
MW-6	Water	10/21/04	10.0 U	2.5 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	2.5 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U
MW-7	Water	10/25/01	2.0 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	2.0 U	0.5 U	5.0 U	0.5 U	5.0 U	0.5 U	0.5 U	2.0 U	2.0 U
MW-7	Water	03/08/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7 Duplicate	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-7	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/25/01	2.0 U	0.5 U	0.5 U	0.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.5 U	1.0 U	0.5 U	2.0 U	0.5 U	5.0 U	0.5 U	5.0 U	0.5 U	0.5 U	2.0 U	2.0 U
MW-8	Water	03/07/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-8	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	2-Chloroethyl Vinyl Ether	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Trichlorotrifluoroethane	Carbon Disulfide	Methylene Chloride	*trans*- 1, 2-dichloroethene	1,1-Dichloroethane	2-Butanone (MEK)	2,2-Dichloropropane	*cis* -1, 2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-9	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9 Duplicate	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/03/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	02/13/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**0.69**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	03/08/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	01/22/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13 Duplicate	Water	03/06/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	10/04/02		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	10/21/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	**1.0**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	02/12/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	10/22/04		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U		0.5 U	2.0 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = Reported result is from a dilution

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-9	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-9	Water	10/03/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	01/22/02	0.5 U	0.5 U	**0.57**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/03/02	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	02/13/04	0.5 U	0.5 U	**0.66**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-10	Water	10/21/04	0.5 U	0.5 U	**1.7**	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-11	Water	01/22/02	0.5 U	**2.0**	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.6**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	**4.7**	**3.1**	**8.2**	0.5 U	0.5 U
MW-11	Water	03/08/02	0.5 U	**1.2**	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**1.1**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	**2.9**	**2.3**	**5.2**	0.5 U	0.5 U
MW-12	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	**0.52**	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-12	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	01/22/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13 Duplicate	Water	03/06/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-13	Water	10/04/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-14	Water	10/21/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	02/12/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-15	Water	10/22/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2.0 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = Reported result is from a dilution

TABLE 5
VOLATILE ORGANIC COMPOUNDS (µg/L)
GROUNDWATER
McCall Oil and Chemical

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-9	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9 Duplicate	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-9	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/03/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	02/13/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-10	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	Water	01/22/02	**4.2**	0.5 U	0.5 U	2.0 U	**6.1**	2.0 U	2.0 U	2.0 U	2.0 U	**4.5**	2.0 U	0.5 U	2.0 U	0.5 U	**2.4**	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-11	Water	03/08/02	**3.6**	0.5 U	0.5 U	2.0 U	**5.2**	2.0 U	2.0 U	2.0 U	2.0 U	**3.3**	2.0 U	0.5 U	2.0 U	0.5 U	**2.3**	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-12	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	01/22/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	**4.8**	2.0 U
MW-13	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13 Duplicate	Water	03/06/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-13	Water	10/04/02	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-14	Water	10/21/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	02/12/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
MW-15	Water	10/22/04	2.0 U	0.5 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

NOTE: µg/L = micrograms per liter or parts per billion. U = not detected at or above the indicated method reporting limit. J = estimated concentration. D = Reported result is from a dilution

Oregon
John A. Kitzhaber, M.D., Governor

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February 22, 2005

Mr. Ted McCall
McCall Oil and Chemical Corporation
5480 NW Front Avenue
Portland, Oregon 97210

RE: Status Report
McCall Oil Site
ECSI No. 134

Dear Mr. McCall:

Thank you for submitting the January 14, 2005 *Status Report* for the McCall Oil Site. The Department of Environmental Quality (DEQ) reviewed the report and has the following comments.

General Comments

Recent storm water data was not included in the *Status Report*. The DEQ requested sampling and analysis of storm water to continue evaluation beyond the two rounds of data (samples from 2000 and 2002) presented in the July 2004 *Draft Remedial Investigation (RI)*. This evaluation would also include the effectiveness of storm water Best Management Practices (BMPs) implemented at the site. If recent storm water samples have not been collected and analyzed, DEQ requests that you collect at least one storm water sample within 30 days from the four locations and using the same analyses that were conducted for the RI.

Specific Comments

Table 5 The table's heading identifying chemicals is missing from page 1 of 12. Please provide a corrected page to substitute in the document. Also, please explain the meaning of note "D."

Table 9 Concentrations of chromium, copper, lead, and zinc in catch basin S-3 samples collected on November 4, 2004 continue to be elevated above the probable effects concentration ecological screening levels. Please clarify:

- whether the S-3 sampling location was in the catch basin or from within filter fabric sediment trap;
- the frequency, volume, and disposition of sediment removal from storm water catch basins (including S-3);

- the sediment load from location S-3 that discharges to the Willamette River (i.e., evaluate the amount of sediment that passes any upland sediment traps); and
- the current status of BMPs in this drainage area and suggestions for improvements.

Please provide the requested information within 30 days. Please call me at (503) 229-5326 to discuss the requested submittals or if you have any questions.

Sincerely,

Tom Gainer, P.E.
Project Manager
Cleanup & Portland Harbor

cc: Rod Struck, DEQ NWR
John Edwards, Anchor Environmental

November 29, 2004

Elliot Zais
Water Quality Source Control, NWR
Department of Environmental Quality
2020 SW 4th Avenue
Suite 400
Portland, OR 97201-4987

RE: McCall Oil Terminal, Portland
Oil and Grease Sampling and Separator Operations

Dear Mr. Zais:

We have received a copy of the November 5, 2004 letter from Neil Mullane to Michael J. Pronold at Portland Bureau of Environmental Services (BES). We understand that you discussed this letter with Rick Schwarz at Anchor Environmental, L.L.C. Mr. Schwarz has subsequently discussed our concerns about the third point in the letter with Sebrina Deal at BES. The purpose of this letter is to document our understanding of the status of these discussions and to provide information (statistical comparison of data from manually and automatically collected samples) that you discussed with Mr. Schwarz.

The first point raised in the November 5 letter addresses the use of the automatic sampler. We believe that the automatic sampler enhances our ability to collect representative samples of treated storm discharge, and we appreciate your support of our continued use of the sampler. We are in the process of replacing the vinyl sampler tubing with Teflon lines made for this purpose. Regarding points 1b. and 1c. in the letter, we have always used the Isco sampler to pump the sample directly into the glass bottle supplied by our laboratory, and we previously modified the sampler program so that the entire 1-liter sample is collected at once.

As you discussed with Mr. Schwarz, the comparison of our last manually collected samples and the automatically collected samples shows that there is no statistical difference between the results. We have attached a summary of the data and the statistical comparison. We propose that this comparison of existing data replace the requirement to simultaneously collect samples manually and automatically. As you requested, we will perform a similar comparison of the data after we have collected a similar number of samples using the automatic sampler with the Teflon sample tubing.

The second point raised in your letter noted that the sampler is activated when flow reaches 45 gallons per minute (gpm). To clarify this point, we reprogrammed the sampler to address a concern raised by Ms. Deal previously. She was concerned that we could miss collecting a sample during a month if the discharge from the separator remained at a low level, less than 45 gpm, for an extended period. The sampler is now activated when flow from the separator reaches 35 gpm.

The third point raised in the November 5 letter addresses the addition of city water to the separator. The letter refers to two options proposed by Ms. Deal in an earlier letter. We are very concerned that using either of the two plans proposed by Ms. Deal will result in an otherwise avoidable release of oil to the Willamette River. Ms. Deal is concerned that filling the separator with city water dilutes the samples that are collected during the next storm. She has proposed leaving the separator empty until it is filled by runoff from the next storm. She acknowledges indirectly that the separator is inoperable until it is filled to the operating level and proposes using absorbent pads and booms to capture oil. We are concerned, however, that the absorbent materials would incompletely retain the oil in the high flow rate at the effluent of the separator resulting in a release.

We proposed an alternative plan, which Ms. Deal has indicated would be acceptable, in which we would activate an alternate program for collecting the sample when the annual maintenance is performed. Under this plan, McCall will continue to perform annual maintenance and refill the separator with city water. The maintenance procedure will include temporarily reprogramming the sampler to collect the next sample after the city water had been substantially discharged. The alternate program would incorporate a delay to collect the sample only after twice the capacity of the separator had been discharged. Discharging twice the capacity of the separator before sampling will substantially discharge the city water, accounting for mixing of storm and city water in the separator. After the sample is collected, the normal program will be reactivated to collect the sample when the flow rate reaches 35 gpm.

We will proceed to make the changes proposed in this letter unless we receive notice from you that we need to alter this plan. If you have any questions about this letter, please call Rick Schwarz at Anchor Environmental (503-670-1108, extension 15).

Sincerely,

Ron Brown

cc: Sebrina Deal, City of Portland, BES

McCall Oil
Portland, Oregon
Oil/Water Separator Effluent

Week	Oil and Grease
Dec 1, 2003	3.8
Dec 8, 2003	2 U
Dec 15, 2003	3.4
Dec 22, 2003	2 U
Dec 29, 2003	2 U
Jan 5, 2004	2 U
Jan 12, 2004	2 U
Jan 19, 2004	3.4
Jan 26, 2004	3.5
Feb 2, 2004	6
Feb 9, 2004	2 U
Feb 16, 2004	2 U
Feb 23, 2004	2 U
Mar 1, 2004	2 U
Mar 8, 2004	2 U
Mar 15, 2004	2 U
Mar 22, 2004	2 U
Mar 29, 2004	2 U
Apr 5, 2004	3.2
Apr 12, 2004	2 U
Apr 19, 2004	2 U
Apr 26, 2004	2.1
May 3, 2004	2 U
May 10, 2004	3.8
May 17, 2004	2 U
May 24, 2004	2 U
May 31, 2004	2 U
Jun 7, 2004	2.4
Jun 14, 2004	2 U
Jun 21, 2004	3.4
Jun 28, 2004	2 U
Jul 5, 2004	No sample - no discharge
Jul 12, 2004	No sample - no discharge
Jul 18, 2004	No sample - no discharge
Jul 28, 2004	No sample - no discharge
Aug 2, 2004	2.9
Aug 9, 2004	2 U
Aug 16, 2004	2.6
Aug 23, 2004	5
Aug 30, 2004	2 U
Sep 6, 2004	2 U
Sep 13, 2004	2 U
Sep 20, 2004	5.1
Sep 27, 2004	2 U
Oct 4, 2004	2.1
Oct 11, 2004	2 U
Oct 18, 2004	2 U
Oct 25, 2004	2 U

Begin sampling with Isco sampler

For manually collected samples
Frequency of detection 30%

Evaluation of manually collected O&G data using 1/2 the laboratory reporting limit for nondetects	
arithmetic mean	1.8 mg/L
standard deviation	1.4

For automatically collected samples
Frequency of detection 38%

Evaluation of automatically collected O&G data using 1/2 the laboratory reporting limit for nondetects	
arithmetic mean	1.9 mg/L
standard deviation	1.3

McCall Oil
Portland, Oregon
Oil/Water Separator Effluent

Compare data sets with Student's t test of detected values

n_1 =	7
n_2 =	8
$mean_1$ =	3.6
$mean_2$ =	3.4
S_1 =	1.1
S_2 =	1.1
σ =	1.16
T =	0.36
$t_{.95}$ =	1.77
with v =	13

Notes:

The data sets are statistically the same when the calculated T value is less than the standard t value as is the case here T (= 0.36) < $t_{.95}$ (= 1.77)

n_1 = Number of manually collected samples with O&G detected (data set 1)

n_2 = Number of automatically collected samples with O&G detected (data set 2)

$mean_1$ = Arithmetic mean of values in data set 1

$mean_2$ = Arithmetic mean of values in data set 2

S_1 = Standard deviation of data set 1

S_2 = Standard deviation of data set 2

$$\sigma = \sqrt{\frac{n_1 S_1^2 + n_2 S_2^2}{n_1 + n_2 - 2}}$$

$$T = \frac{mean_1 - mean_2}{\sigma \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$t_{.95}$ = standard t value at 95% confidence (with v degrees of freedom)

v = degrees of freedom = $n_1 + n_2 - 2$

Detects in manually collected samples (data set 1)	
Dec 1, 2003	3.8
Dec 15, 2003	3.4
Jan 19, 2004	3.4
Jan 26, 2004	3.5
Feb 2, 2004	6
Apr 5, 2004	3.2
Apr 26, 2004	2.1

Detects in automatically collected samples (data set 2)	
May 10, 2004	3.8
Jun 7, 2004	2.4
Jun 21, 2004	3.4
Aug 2, 2004	2.9
Aug 16, 2004	2.6
Aug 23, 2004	5
Sep 20, 2004	5.1
Oct 4, 2004	2.1

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
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October 16, 2003
030162-01

Tom Gainer, PE
Oregon Department of Environmental Quality
2020 SW 4th Ave, Suite 400
Portland, Oregon 97201-4987

Re: Response to July 30, 2003, Comment Letter, Remedial Investigation Report, McCall Oil Site, ECSI No. 134

Dear Tom:

Thanks again for meeting with us on September 4, 2003 to discuss your July 30, 2003 comment letter. We have reviewed your September 18, 2003 e-mail message regarding some of the risk questions that were discussed in the meeting. The purpose of this letter is to respond to DEQ's comments and requests in the July 30 letter, and provide a site monitoring plan.

In the following sections we have reproduced DEQ's General and Specific Comments from the July 30, 2003 letter. The Anchor Environmental LLC (Anchor) response to each DEQ comment is in italics.

DEQ General Comments

The report indicates that full human health risk evaluation of on site workers is outside the objective of the Agreement. This is incorrect, as the Agreement does not exclude particular receptors (e.g., on site occupational workers and construction workers) or migration pathways (e.g., volatilization of subsurface contaminants to indoor or outdoor air) for risk evaluation. DEQ expects the Remedial Investigation (RI) to include a complete human health and ecological risk screening and submittal of a complete Human Health Risk Assessment following approval of the RI. Ultimately, a Level II Ecological Risk Assessment will be required to evaluate potential threats to the Willamette River.

An upland human health risk assessment will be done by Anchor following DEQ approval that the upland remedial investigation is complete. A level I Ecological Scoping Assessment was completed by Anchor and the assessment report was Appendix A to the June 2003 RI Report. That assessment concluded that the upland portion of the site does not contain habitat for threatened or endangered species. Therefore, a Level II Ecological Risk Assessment for the upland portion of the site will not be needed. In the September 4 meeting DEQ agreed that a Level II Ecological Risk Assessment will not be required as part of this RI because the in-water portion of

the Portland Harbor assessment is the responsibility of the EPA and the Lower Willamette Group CERCLA investigation.

Specific Comments

1. Section 1.2

- The statement that "no groundwater COPCs were identified that would potentially impact aquatic life" is not supported (see comments on Table 13).

  Agreed, text will be modified accordingly.

- DEQ agrees that the industrial site does not represent a threat to terrestrial ecological receptors given the absence of suitable habitat onsite. However, there is still a potential threat to Willamette river surface water, and sediment (not mentioned in the summary).

  Agreed

2. Sections 1.2 and 4.2 Discussions of ecological risk should include an evaluation of site surface soil and catch basin sediment migrating to surface water sediment ecological receptors.

The report will be revised to include a description of the stormwater best management practices (BMP) that are being followed at the site, including catch basin particulate filters, oil/water separation, and annual cleaning of the catch basins and separator. The BMPs currently being followed are believed to control the transport of stormwater particulates to the river.

3. Sections 1.3.4 and 5.4 DEQ suggests the flux chamber method to evaluate volatilization of subsurface contamination to indoor or outdoor.

The flux chamber method is currently being evaluated for applicability to the site conditions. Future air pathway evaluation will begin with a comparison of soil and groundwater VOC concentrations to the generic risk based concentrations (RBCs) in the guidance document Risk Based Decision Making for the Remediation of Petroleum Contaminated Site, ODEQ, September 22, 2003.

4. Section 3.2.2

- Objective D The identification of human and ecological receptors is not complete; see comments on the Conceptual Site Model.

See response to comment 6

- Objective F Both Human and Ecological Risk Assessments must be conducted for all appropriate receptors and pathways, not just "a risk assessment focused on the surface water and groundwater pathways as they potentially affect ecological receptors at the site."

Regarding ecological risk assessment, refer to the previous response to the General Comments. McCall plans to conduct an upland human health risk assessment, but not as part of the source control evaluation.

- Objective I Evaluation and implementation of source control measures, similar to interim remedial action measures, can occur during any phase of site activities. Such source control measures should not be confused with the final site remedy, which occurs after the risk assessments and feasibility study. DEQ expects that RIs completed in Portland Harbor should conclude whether the site is a current source of contamination to the Willamette River, and if so, whether source control measures are warranted. It appears that the moderate levels of dissolved phase petroleum contamination observed at the subject site's shoreline groundwater monitoring wells do not warrant source control measures at this time. However, groundwater monitoring and risk assessments must continue.

Agreed, with the understanding that upland human health issues are the focus of continued risk assessment. See previous response.

5. Section3.3 Descriptions of the 10/15/02 and 10/24/02 entries should be provided.

We will search our files and provide the relevant information.

6. Section 3.4.1 Additional pathways not shown in the Conceptual Site Model (Figure 3) require screening and potential further evaluation.

- Construction workers (as distinct from limited trench workers) should be included as a potential receptor.
- Inhalation of volatilized compounds in outdoor air (from soil and groundwater) and ingestion/direct contact with soil are potentially complete pathways for onsite workers and construction workers. While current direct occupation soil contact is mostly prevented given the extent of paving at the site, this is a potential future pathway that is typically evaluated.
- Surface soil migrating to surface water/sediment should be shown as a potentially complete pathway.
- Fish ingestion by ecological receptors should be included, to account for chemicals in the food web.

We agree with these comments except for the last bullet regarding fish ingestion. We are willing to show fish ingestion by ecological receptors as a potential pathway, with the understanding that evaluation of that pathway is outside the scope of the Agreement between DEQ and McCall. If that pathway is to be studied, it would be the responsibility of EPA and the Lower Willamette Group to carry out the investigation.

7. Section 4.1 A figure showing land uses in the area should be included in the beneficial use evaluation.

Agreed

8. Section 4.4.2.2 To highlight the area of LNAPL described in this section, it would be useful to show the known extent of LNAPL on a figure, such as Figure 2.

Agreed

9. Section 4.4.2.3

- Average and maximum groundwater and soil concentrations were used for screening. The 90 percent upper confidence limit on the arithmetic mean or the maximum concentration can be used for screening, but not average concentrations.

Agreed. As discussed in our meeting, we plan to pool the data for the shoreline monitoring wells to calculate the 90 percent upper confidence limit. Alternatively, we will default to the maximum concentration for screening.

- MW-4 and MW-5 should be considered shoreline monitoring wells.

MW-5 will be considered a shoreline well. However, a new well is planned to be installed closer to the shoreline downgradient of MW-4. This new well is proposed in section 5.2. The new well will replace MW-4 in the monitoring program as a shoreline well.

- **Human Health Criteria** The 80th percentile of arsenic groundwater data from a USGS study was used as background. DEQ does not consider this an appropriate background concentration. Alternatively, upgradient groundwater concentrations can be used to determine a site-specific background level. Otherwise, a health-based concentration should be used for screening. As discussed above, average site groundwater concentrations should not be used for screening. The upper confidence limit on the mean should be used, or the maximum concentration.

Anchor plans to add arsenic as a target analyte in additional existing and proposed monitoring wells. The wells proposed for arsenic testing are listed in the proposed monitoring plan at the end of this letter. However, we would like to discuss this issue further with DEQ, because natural arsenic concentrations in both soil and groundwater are elevated above risk-based levels in the Pacific Northwest, and regional values are commonly used by DEQ to screen soil arsenic concentrations (e.g., Washington Department of Ecology, 1994). We would like to revisit the issue of determining arsenic background concentration after we have obtained results of future arsenic monitoring.

- **Upland Site Workers** Draft DEQ risk-based decision making guidance for petroleum hydrocarbons was used to screen total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs); see also Tables 5 and 10. This guidance is still undergoing revision, and should not be relied on for screening (the guidance is labeled "do not cite or quote"). Final guidance for TPH may be available from DEQ by the time the risk assessment for the site is performed. In the interim, TPH should be screened in and considered a COPC that cannot be quantitatively evaluated at this time. A related consideration is the presence of LNAPL. It has already been concluded that further evaluation of LNAPL is required.

Agreed, we plan to screen site data against the relevant petroleum hydrocarbon and chlorinated VOC generic RBCs in the September 22, 2003 DEQ RBDM guidance. The LNAPL evaluation is currently being conducted.

- **Hot Spot Evaluation** RBCs are acknowledged as not being applicable in areas of free product. Given that the risk of contact with free product cannot be quantitatively evaluated, it should be assumed (and stated) that such contact could result in unacceptable risk.

  Agreed

10. Section 4.5.2.2

- Storm water data were not compared to human health fish consumption criteria because of the short emission times. However, storm water may be contributing or have contributed in the past to river sediment concentrations that may result in unacceptable risk. The potential for contributing to the load of chemicals in the river is of concern to DEQ. To evaluate storm water runoff, available surface water screening values should be used. DEQ's general approach for addressing storm water runoff for sites on the Willamette River is to screen using five times the AWQC.

  This issue was resolved by DEQ in a September 18 e-mail memo from Tom Gainer to John Edwards as follows:

  > *Surface Water Screening (Comment 10, Section 4.5.2.2). In the RI report, storm water data were not compared to human health fish consumption criteria because of the short emission times. DEQ's comment was to screen storm water data using five times the AWQC, consistent with the draft approach for source control screening on the Portland Harbor project. However, the source control screening approach applies to acute AWQC for aquatic organisms, not human health criteria. This screening using acute AWQC is based on 1200Z general storm water permit requirements. DEQ agrees that additional screening using human health AWQC is not required.*

- Catch basin sediment, which can be transported to the Willamette River with storm water, should also be compared to DEQ's freshwater sediment ecological SLVs. Note that some sediment SLVs are available that consider bioaccumulation.

  During the meeting Anchor noted that there is not likely a current significant pathway for suspended particulates in stormwater to reach the Willamette River because the site stormwater system has particulate filters on the catch basins. Ted McCall reports that the site operators do annual cleaning of the catch basins and oil water separator. Anchor plans to provide additional information on these stormwater BMPS to DEQ in support of our conclusion that catch basin sediment does not have a significant current pathway to the river. Screening of whole-water stormwater data will provide additional weight of evidence to support this conclusion.

11. Section 4.6 The conclusions regarding which exposure scenarios can be eliminated should be re-evaluated following revision of the exposure point concentrations and screening values.

Agreed

12. Section *5.5* As mentioned in the General Comments, the RI Agreement for this site includes an upland Human Health Risk Assessment. Therefore, eliminating data gaps described in Section 5 will support a Human Health Risk Assessment for upland site workers.

Agreed

13. Section *5.6* The conclusions for storm water quality should be re-evaluated following appropriate screening as described above.

Per DEQ's clarification on Comment No. 10 (see above), screening of stormwater will be updated to include comparisons to 5 times the acute AWQC for aquatic life. Our preliminary review of the data indicates the report's conclusions regarding stormwater quality are not likely to change with this revision.

14. Table *5* Bold and shaded items should be defined. As discussed above, draft TPH RBCs should not be used for screening at this point. For instance, based on public comment, DEQ is intending to replace the construction worker contact with water pathway with the excavation worker contact with water pathway. The evaluation of TPH can occur at a later stage in the risk assessment. Also, the specific scenarios for which the RBCs apply should be indicated (e.g., direct contact or volatilization to indoor air).

Agreed, we plan to screen site data against the relevant petroleum hydrocarbon and chlorinated VOC generic RBCs in the September 22, 2003 DEQ RBDM guidance. We will define the bold and shaded items in the table

15. Table 7 General screening of chemicals in groundwater was not performed (screening was limited to monitoring wells at the shoreline). Volatilization of chemicals from groundwater to indoor and outdoor air are relevant pathways and should be included.

Agreed, we plan to screen site data against the relevant petroleum hydrocarbon and chlorinated VOC generic RBCs in the September 22, 2003 DEQ RBDM guidance. If the VOC concentrations in site soil and water adjacent to site office buildings are lower than the relevant generic RBCs, further evaluation of the air pathway should not be necessary.

16. Table 8 It is not clear if chemical analyses of soil and groundwater samples were performed for chromium VI. Given the presence of CCA, it is prudent to determine if chromium VI is present.

Chromium in upland soils is well below the human health PRG (see Table 12), and dissolved chromium in shoreline monitoring wells is well below the chronic AWQC (see Table 13), even assuming that all of the chromium is present as Cr-VI. Therefore, it is not necessary to perform chromium speciation analysis.

17. Table 9 Even if it were acceptable to use TPH RBCs at this point, it is not appropriate to use a mineral oil RBC for heavy fuel oil.

See response to comment 9 regarding further screening against petroleum hydrocarbons RBCs.

18. Table 10 PAHs are screened using draft RBC values. Generally, the use of draft values should be avoided because they are undergoing review and revision. However, for constituents such as PAHs, the draft RBCs are similar to existing RBC values (generally differing because of accepted changes to toxicity values or exposure assumptions), and DEQ will allow their use. This does not apply to TPH, given the greater uncertainty over final TPH RBC values. RBCs for other relevant pathways such as volatilization to indoor air should be included.

See responses to comments 9 and 15 regarding planned screening efforts.

19. Table 11 Screening of chemicals in soil was not performed. Onsite workers could contact soil, and VOCs could volatilize from soil into indoor or outdoor air.

Agreed, we plan to screen site data against the relevant petroleum hydrocarbon and chlorinated VOC generic RBCs in the September 22, 2003 DEQ RBDM guidance.

20. Table 13 EPA's equilibrium partitioning approach (relating sediment and water concentrations) was used for most of the surface water screening values. Although draft guidelines have been prepared by EPA, the equilibrium partitioning approach is not general practice. DEQ is in the process of developing screening values for sediment, and will likely not incorporate the equilibrium partitioning approach. Ecological screening values for surface water, soil, and sediment are available in DEQ ecological risk assessment guidance (December 2001). The DEQ guidance values are appropriate screening values, and should be used for this project. In addition, EPA ambient water quality criteria (used for human health) are also appropriate screening criteria.

This issue was further clarified by DEQ in a September 18 e-mail memo from Tom Gainer to John Edwards as follows:

> *<u>PAH Screening Values (Comment 20, Table 13).</u> DEQ's comment objected to applying the equilibrium partition approach in general, and missed the point that it was only the draft surface water values that were being used as screening values. DEQ recognizes that there are few SLVs available for PAHs, and appreciates the effort made to determine additional screening values for*

PAHs. However, in general, DEQ does not incorporate draft EPA values. For consistency in Portland Harbor projects, available DEQ SLVs should be used for screening.

We will revise this table to include existing DEQ Level-II ecological screening levels for surface water rather than the draft EPA final chronic values. Per DEQ guidelines, Q = 1 will be used for screening criteria that are based on fish effects (i.e., as surrogates for threatened salmon), and Q = 5 will be used for criteria that are based on ecological effects to non-threatened groups of organisms.

21. Table 14 Storm water is screened using ecological values, and not human health values given the short emission times. However, potential human health impacts will need to be evaluated. EPA ambient water quality criteria (for fish consumption) are appropriate screening criteria. As acknowledged, screening criteria for PAHs are not yet developed. In this case, as with any chemicals for which screening criteria are not available, the chemicals should be screened in for evaluation in the risk assessment. For arsenic, the health-based level should be used for screening, unless a site-specific background level is established. For ecological screening, the values available in DEQ guidance (December 2001) should be used.

As subsequently clarified by DEQ (see Response to Comment No. 10, first bullet), it is not appropriate to screen stormwater quality using human health-based (fish consumption) criteria. We will update the stormwater screening analysis to include DEQ Level-II ecological screening levels if national AWQC are not available (see Response to Comment No. 20).

Plan and Schedule for Future Investigations and Monitoring

Supplemental Site Investigations

The attached map shows the locations for proposed wells MW-14 and 15. Well MW-14 will provide an additional shoreline monitoring well and replaces well MW-4. The need for well MW-14 was discussed in section 5.2 of the June 2003 RI report. MW-14 is planned to provide information on dissolved arsenic concentrations in groundwater for evaluation of potential surface water impacts.

The GeoProbe investigation at the LNAPL area near MW-11 has been completed. The third quarterly report provided DEQ with some of the results from that work. We plan to install a monitoring well, MW-15, downgradient from the LNAPL plume. Well MW-15 is proposed in a location that should obtain representative dissolved hydrocarbon concentrations downgradient of the LNAPL plume. This well was discussed in section 5.3 of the June 2003 RI report. Proposed Monitoring wells MW-14 and MW-15 are planned to be installed in the fourth quarter 2003.

We are preparing a workplan for the shoreline investigation near well MW-8. That work will involve the installation and sampling of push probe well nests in the shallow sediment

downgradient from well MW-8. To take advantage of favorable river conditions that work is preliminarily scheduled for Summer/Fall 2004.

Proposed Groundwater Monitoring Plan

The attached table contains the proposed semi-annual groundwater monitoring plan that was discussed at the September 4, 2003 meeting. The table lists the existing wells and the two proposed wells MW-14 and 15. The wells remaining in the sampling program, plus the new wells, will be monitored on a semi-annual basis, e.g. twice per year. The table lists the target analytes that will be tested in each well. For some wells selected target analytes are proposed to be deleted from the monitoring program. The rationale for each proposed modification is explained in the last column of the table.

Stormwater and Catch Basin Sediment Monitoring

Anchor plans to rescreen the RI stormwater data as previously described in this letter. We believe that the results of the rescreen will support our conclusion that site stormwater does not require additional monitoring. Therefore we do not currently have plans to conduct additional stormwater monitoring. The site catch basins and oil/water separator are cleaned of sediment annually. Many of the key catch basins on the Quadra site are equipped with particulate filters. For these reasons we do not believe that the site is a significant source of stormwater sediment to the river, and we do not plan to conduct additional testing of catch basin sediment.

We hope that this letter satisfactorily addresses the issues in DEQ's July 30 letter. Following your review please contact me for further discussions, if needed.

Respectfully Submitted,

John E. Edwards, RG, CEG
Anchor Environmental, L.L.C.

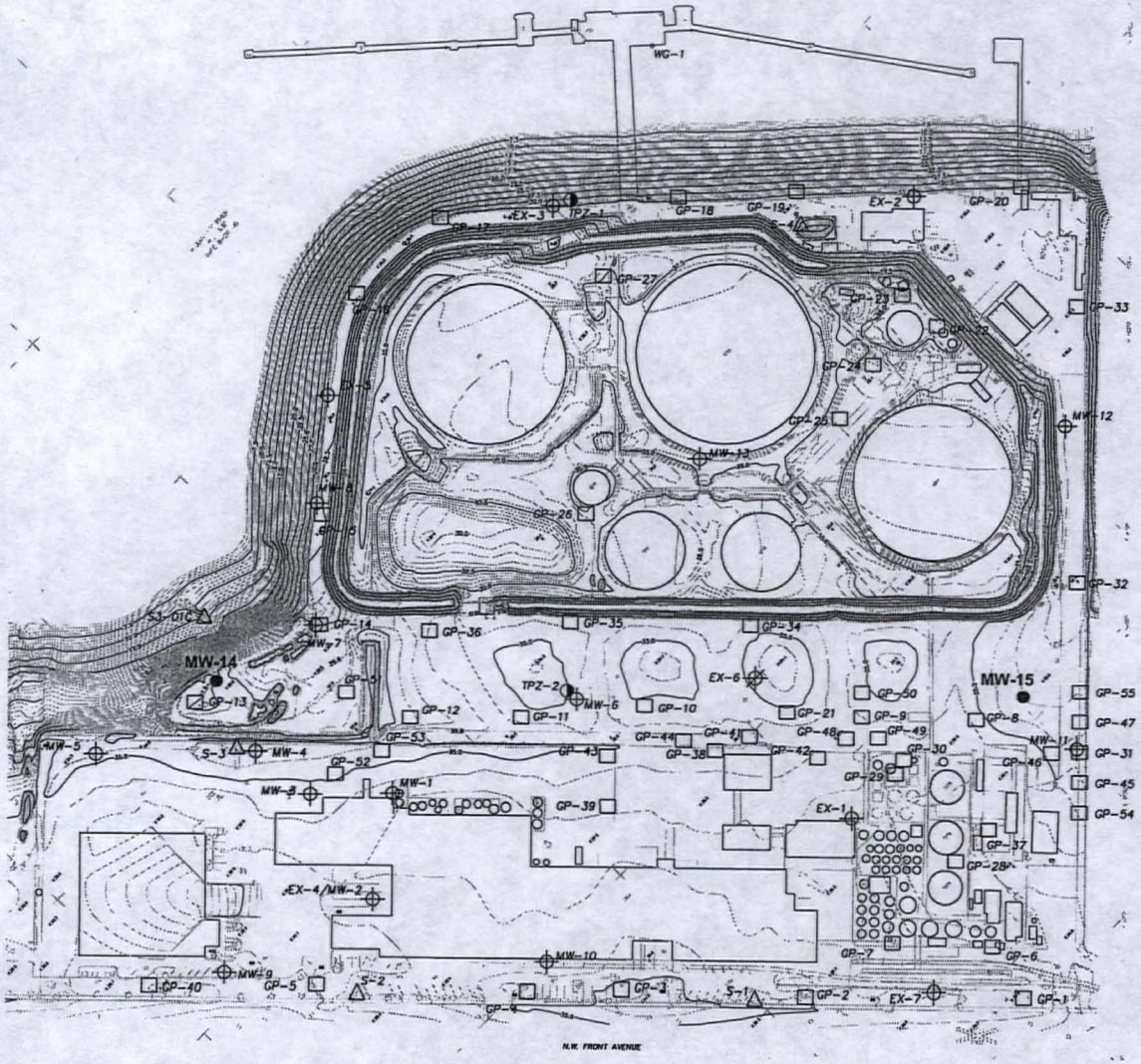
Cc: Ted McCall

Attachment: Table: Draft Groundwater Sampling Plan
Figure: Well Location Map

P:\Projects\McCall Portland\ResponseDEQCommentLetterOct03_TMT.doc

Draft Sampling Plan
McCall Oil/Great Western Chemical

Well	Sample	Chlorinated VOCs	PAHs	Total Petroleum Hydrocarbons	As (Total and Dissolved)	Rationale for excluding or modifying
EX-1	X	X		X	X	Not a key PAH Monitoring Location
EX-2	X		X	X	X	Historically ND for VOCs
EX-3	X		X	X	X	Historically ND for VOCs
EX-4 (MW-2)	X	X		X	X	Not a key PAH Monitoring Location
EX-5						Historically nondetect
EX-6						Decommissioned, replaced with MW-6
EX-7	X			X	X	VOCs historically ND, not a key PAH monitoring location.
MW-1	X	X		X	X	Not a key PAH Monitoring Location
MW-3	X	X		X	X	Not a key PAH Monitoring Location
MW-4						Redundant with MW-3 and MW-14 (to be installed at shoreline)
MW-5	X	X	X	X	X	
MW-6	X	X		X	X	Not a key PAH Monitoring Location
MW-7	X	X	X	X	X	Redundant with MW-8 and MW-14 (to be installed at shoreline)
MW-8	X	X	X	X	X	
MW-9	X			X	X	Not a key PAH Monitoring Location; Historically ND for VOCs.
MW-10	X	X		X	X	Not a key PAH Monitoring Location
MW-11						Screen contains petroleum product, not suitable for water quality nitoring
MW-12				X	X	Historically ND for VOCs and PAHs
MW-13						Redundant with EX-2 and EX-3
MW-14	X	X	X	X	X	
MW-15	X	X	X	X	X	
Notes:						



- MONITORING WELL
- DECOMMISSIONED MONITORING WELL
- GEOPROBE BORING
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- VEGETATION
- BUILDING
- TANK
- PIEZOMETER
- PROPOSED MONITORING WELL LOCATION

HORIZONTAL DATUM
COORDINATES ARE ON A LOCAL PLANE AND ARE ASSUMED.

ELEVATION DATUM
ELEVATIONS ARE BASED ON CITY OF PORTLAND BENCHMARK #2528.
ELEVATION = 34.64 FEET

0 150
Scale in Feet

Note: Figure prepared from drawing provided by IT Corporation.

MCC-0202016202-01.dwg cvd 5/17/02

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Boring and Well Locations
McCall Oil

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
FAX (503) 229-6945
TTY (503) 229-5471

July 30, 2003

Mr. Ted McCall
McCall Oil and Chemical Corporation
5480 NW Front Avenue
Portland, Oregon 97210

RE: Remedial Investigation Report
McCall Oil Site
ECSI No. 134

Dear Mr. McCall:

Thank you for submitting the June 2003 *Remedial Investigation Report* for the McCall Oil Site. The Department of Environmental Quality (DEQ) reviewed the report and has the following comments.

General Comments

The report indicates that full human health risk evaluation of on site workers is outside the objective of the Agreement. This is incorrect, as the Agreement does not exclude particular receptors (e.g., on site occupational workers and construction workers) or migration pathways (e.g., volatilization of subsurface contaminants to indoor or outdoor air) for risk evaluation. DEQ expects the Remedial Investigation (RI) to include a complete human health and ecological risk screening and submittal of a complete Human Health Risk Assessment following approval of the RI. Ultimately, a Level II Ecological Risk Assessment will be required to evaluate potential threats to the Willamette River.

Specific Comments

1. Section 1.2
   - The statement that "no groundwater COPCs were identified that would potentially impact aquatic life" is not supported (see comments on Table 13).
   - DEQ agrees that the industrial site does not represent a threat to terrestrial ecological receptors given the absence of suitable habitat onsite. However, there is still a potential threat to Willamette river surface water, and sediment (not mentioned in the summary).

2. Sections 1.2 and 4.2 Discussions of ecological risk should include an evaluation of site surface soil and catch basin sediment migrating to surface water/sediment ecological receptors.

3. Sections 1.3.4 and 5.4 DEQ suggests the flux chamber method to evaluate volatilization of subsurface contamination to indoor or outdoor.

4. Section 3.2.2
   - **Objective D** The identification of human and ecological receptors is not complete; see comments on the Conceptual Site Model.
   - **Objective F** Both Human and Ecological Risk Assessments must be conducted for all appropriate receptors and pathways, not just "a risk assessment focused on the surface water and groundwater pathways as they potentially affect ecological receptors at the site."
   - **Objective I** Evaluation and implementation of source control measures, similar to interim remedial action measures, can occur during any phase of site activities. Such source control measures should not be confused with the final site remedy, which occurs after the risk assessments and feasibility study. DEQ expects that RIs completed in Portland Harbor should conclude whether the site is a current source of contamination to the Willamette River, and if so, whether source control measures are warranted. It appears that the moderate levels of dissolved phase petroleum contamination observed at the subject site's shoreline groundwater monitoring wells do not warrant source control measures at this time. However, groundwater monitoring and risk assessments must continue.

5. Section 3.3 Descriptions of the 10/15/02 and 10/24/02 entries should be provided.

6. Section 3.4.1 Additional pathways not shown in the Conceptual Site Model (Figure 3) require screening and potential further evaluation.
   - Construction workers (as distinct from limited trench workers) should be included as a potential receptor.
   - Inhalation of volatilized compounds in outdoor air (from soil and groundwater) and ingestion/direct contact with soil are potentially complete pathways for onsite workers and construction workers. While current direct occupational soil contact is mostly prevented given the extent of paving at the site, this is a potential future pathway that is typically evaluated.
   - Surface soil migrating to surface water/sediment should be shown as a potentially complete pathway.
   - Fish ingestion by ecological receptors should be included, to account for chemicals in the food web.

7. Section 4.1 A figure showing land uses in the area should be included in the beneficial use evaluation.

8. Section 4.4.2.2 To highlight the area of LNAPL described in this section, it would be useful to show the known extent of LNAPL on a figure, such as Figure 2.

9. Section 4.4.2.3
   - Average and maximum groundwater and soil concentrations were used for screening. The 90 percent upper confidence limit on the arithmetic mean or the maximum concentration can be used for screening, but not average concentrations.
   - MW-4 and MW-5 should be considered shoreline monitoring wells.

- **Human Health Criteria** The 80th percentile of arsenic groundwater data from a USGS study was used as background. DEQ does not consider this an appropriate background concentration. Alternatively, upgradient groundwater concentrations can be used to determine a site-specific background level. Otherwise, a health-based concentration should be used for screening. As discussed above, average site groundwater concentrations should not be used for screening. The upper confidence limit on the mean should be used, or the maximum concentration.
- **Upland Site Workers** Draft DEQ risk-based decision making guidance for petroleum hydrocarbons was used to screen total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs); see also Tables 5 and10. This guidance is still undergoing revision, and should not be relied on for screening (the guidance is labeled "do not cite or quote"). Final guidance for TPH may be available from DEQ by the time the risk assessment for the site is performed. In the interim, TPH should be screened in and considered a COPC that cannot be quantitatively evaluated at this time. A related consideration is the presence of LNAPL. It has already been concluded that further evaluation of LNAPL is required.
- **Hot Spot Evaluation** RBCs are acknowledged as not being applicable in areas of free product. Given that the risk of contact with free product cannot be quantitatively evaluated, it should be assumed (and stated) that such contact could result in unacceptable risk.

10. Section 4.5.2.2
    - Storm water data were not compared to human health fish consumption criteria because of the short emission times. However, storm water may be contributing or have contributed in the past to river sediment concentrations that may result in unacceptable risk. The potential for contributing to the load of chemicals in the river is of concern to DEQ. To evaluate storm water runoff, available surface water screening values should be used. DEQ's general approach for addressing storm water runoff for sites on the Willamette River is to screen using five times the AWQC.
    - Catch basin sediment, which can be transported to the Willamette River with storm water, should also be compared to DEQ's freshwater sediment ecological SLVs. Note that some sediment SLVs are available that consider bioaccumulation.

11. Section 4.6 The conclusions regarding which exposure scenarios can be eliminated should be re-evaluated following revision of the exposure point concentrations and screening values.

12. Section 5.5 As mentioned in the General Comments, the RI Agreement for this site includes an upland Human Health Risk Assessment. Therefore, eliminating data gaps described in Section 5 will support a Human Health Risk Assessment for upland site workers.

13. Section 5.6 The conclusions for storm water quality should be re-evaluated following appropriate screening as described above.

14. Table 5 Bold and shaded items should be defined. As discussed above, draft TPH RBCs should not be used for screening at this point. For instance, based on public comment, DEQ is intending to replace the construction worker contact with water pathway with the excavation worker contact with water pathway. The evaluation of TPH can occur at a later stage in the risk assessment. Also, the specific scenarios for which the RBCs apply should be indicated (e.g., direct contact or volatilization to indoor air).

15. Table 7 General screening of chemicals in groundwater was not performed (screening was limited to monitoring wells at the shoreline). Volatilization of chemicals from groundwater to indoor and outdoor air are relevant pathways and should be included.

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21. Table 14 Storm water is screened using ecological values, and not human health values given the short emission times. However, potential human health impacts will need to be evaluated. EPA ambient water quality criteria (for fish consumption) are appropriate screening criteria. As acknowledged, screening criteria for PAHs are not yet developed. In this case, as with any chemicals for which screening criteria are not available, the chemicals should be screened in for evaluation in the risk assessment. For arsenic, the health-based

level should be used for screening, unless a site-specific background level is established. For ecological screening, the values available in DEQ guidance (December 2001) should be used.

Please provide a response to these comments by September 1, 2003. This submittal should also include the following:

- monitoring schedule for groundwater, stormwater, and catch basin sediment;
- installation and sampling schedule for the new shoreline monitoring well downgradient of MW-4; and
- schedule for conducting additional push-probe investigation of free product in the vicinity of MW-11.

A final RI will be submitted following resolution of DEQ's comments on the draft RI and completion of RI data gap investigations described above. Please call me at (503) 229-5326 to discuss the requested submittals or if you have any questions.

Sincerely,

Tom Gainer

Tom Gainer, P.E.
Project Manager
Cleanup & Portland Harbor

cc: Don Pettit, CU/PH
Mike Poulsen, CU/PH
John Edwards, Anchor Environmental

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

Memorandum

To: Tom Gainer, Oregon DEQ

From: John Edwards

CC: Ted McCall
John Renda
Don Pyle

Date: November 14, 2002

Re: Conceptual Supplemental RI Workplan, McCall, Portland

INTRODUCTION

At the October 24, 2002 meeting with you and Eric Blischke, we agreed to provide a conceptual source control evaluation plan to DEQ by November 15, 2002. This memo provides that plan. At the meeting we reiterated our concerns about conducting a source control evaluation before the DEQ draft Source Control guidance document is fully reviewed and finalized. We also expressed a need to coordinate our source control technology with other Portland Harbor PRPs. During the October 24 meeting we requested that DEQ provide us with a list of Portland Harbor PRPs with groundwater PAH concentrations in the range of McCalls, but your October 31 e-mail message indicated that you were not able to find any sites with PAH groundwater concentrations barely exceeding the source control criteria. This leaves McCall in the difficult position of potentially being the first case of evaluating this situation. Rather than focus entirely on the riverfront source control issue, this memo provides a brief summary of data gaps and tasks for an overall supplemental RI Workplan.

DATA GAPS

1. **Free Product at well MW-11.** The lateral extent and source of the free petroleum product detected at well MW-11 has not been determined.

2. **Exceedance of Ambient Water Quality Criteria (AWQC) in Groundwater at river edge.** The AWQC for certain PAHs in groundwater have been exceeded at well MW-8 on the bank of the Willamette River.

CONCEPTUAL WORKPLAN

Tasks

1. Free Product Characterization.

Petroleum saturated soil was noted in GeoProbe boring soil samples GP-31, 45, 46, 47, 54, and 55. The petroleum has been preliminarily identified as weathered crude oil or weathered bunker C fuel. Additional GeoProbe borings will be used to map the extent of petroleum saturated soil on McCall property. Two to three additional monitoring wells will then be installed at the apparent edge of free product to confirm the extent and thickness of the product.

2. Prepare RI Report.

At the October 24 meeting DEQ requested that McCall prepare an RI report. This will be done after the task 1 free product characterization is done. This report will not include the results of the river edge assessment described in task 3.

3. **Conduct Assessment of Groundwater to River Transition Zone near well MW-8.**

Groundwater PAH concentrations exceed AQWC at monitoring wells MW-6, 8, 9, 10, and 13. However, only well MW-8 is near the Willamette river edge. PAH concentrations in the other river edge wells have consistently been less than AWQC. McCall therefore proposes to further evaluate the transition zone near well MW-8. The proposed conceptual tasks are listed below.

3.1 Contact and attempt to coordinate assessment methodology with other Portland Harbor PRPs.

3.2 Conduct a preliminary bathymetry survey of the river edge near MW-8. The information is needed to determine what monitoring technologies might be feasible under the existing river bottom and depth conditions.

3.3 Design a transition zone monitoring plan in conjunction with DEQ and in consideration of the technologies being used by other PRPs in the Portland Harbor.

3.4 Implement transition zone monitoring plan near well MW-8.

PROPOSED SCHEDULE

Task 1. The additional Geo Probe borings and monitoring wells will be completed during January and February 2003. This will allow enough time to sample the new wells after installation.

Task 2. The draft RI report with the new information from Task 1 will be submitted to DEQ by the end of March, 2003.

Task 3. McCall will begin going through agency files and contacting other PRPs regarding transition zone monitoring within two weeks after DEQ approval of this plan. The bathymetry survey near well MW-8 will be done in July, 2003. A transition zone monitoring plan will be submitted to DEQ by the end of August, 2003. Assuming DEQ approval of the plan, the transition zone monitoring devices will be installed in September, 2003, during low water stage of the river. The monitoring devices can hopefully be sampled several times between September and early winter 2003. The ability of monitoring devices to survive river high water stages is unknown.

McCall will continue to submit quarterly reports of the progress on the above tasks.

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

Memorandum

To: Tom Gainer, DEQ

From: John Edwards

CC: Ted McCall, John Renda

Date: 5/15/02

Re: Aquifer Test Procedures, McCall RI, Portland, Oregon

Purpose. The RI workplan includes determination of the hydraulic conductivity and storage coefficient of the shallow aquifer at the site. That determination will be made by conducting pump tests at monitoring wells MW-6 and EX-3. Those two monitoring wells were selected because hydrogeologic conditions at those two locations should be representative of shoreline area aquifer characteristics and aquifer characteristics in the upland area of the site.

A piezometer was installed adjacent to each well to use as observations wells during the test. Piezometer TPZ-2 is adjacent to well MW-6 and piezometer TPZ-1 is adjacent to EX-3. The piezometers were installed approximately 10 feet from the monitoring wells, this distance should assure that the piezometers will be within the radius of drawdown influence during the tests.

Pump Test Procedures. This memo is intended to be a general guide to the procedures that will be followed, and some modifications will be required based on field decisions influenced by the flow characteristics of each well. The intent is to pump each well at the approximate maximum discharge rate that the well can sustain without the pumping water level dropping below the pump intake depth. The general steps that will be followed are listed below.

1. Appropriate notification will be made to McCall Oil Asphalt plant staff that the tests are going to be conducted. DEQ will also be notified at least one week prior to the tests.

2. Prior to each well test the estimated sustained discharge rate for each well will be determined using a short term step test method. Each well will be pumped at increasing discharge rates over a period of one or two hours while measuring well drawdown to determine the approximate maximum pumping rate for each well.

3. Following the determination of the planned discharge rate for each well, the geologist will set up equipment and measuring devices for the pump test. The minimum equipment list includes;

    - High yield peristaltic and submersible pumps capable of pumping up to 5 gpm.

- Transducer- based waterlevel recording device for the pumping well and the piezometer that is installed adjacent to each well. The geologist will use a hand held electric water level probe to calibrate the transducer readings and to check water levels in more distant wells. The water level readings will be made to the nearest 0.01 ft.

- A calibrated five gallon bucket for measuring pump discharge rate.

- A portable tank to store the pumped water. The tank will be used to transport the water to a larger holding tank onsite.

- A stop watch.

- Flashlight or other lights for use during the night portions of the tests.

4. Before beginning the test at either of the wells, the geologist must evaluate the weather and site conditions to determine the timing of the tests. Because the Willamette River level probably affects the aquifer water level, it would be best not to conduct the tests when we expect the river to have abnormal fluctuations. River level fluctuations could mask the ground water level fluctuations that result from the pump tests. It would be best to conduct the tests during a time when the river level is not changing rapidly due to recent rainstorms. The geologist should also review the river tide table to be able to time the test during a period when there are no abnormally high tidal fluctuations.

5. When recording any hand measured water level, the geologist should write out the entire reading. For Example, the reading should be as follows:

Distance from measuring point(feet) minus tape reading(feet) equals depth to water level(feet)

The geologist should not make the subtraction step in his head and just write down the depth to water because if a subtraction error is made during the test, it may not be possible to correct the reading during later analysis.

6. Before beginning each test the water level at the river gauge and all nearby wells should be obtained and recorded. A separate water level record form should be used for the river gauge and for each well. The river level and the nearby wells should be measured at least twice during the hour before the test to determine if the river and groundwater levels are rising or falling prior to the start of the test. At least one or two monitoring wells should be included that are located well beyond the likely radius of influence of the pumping well. Those measurements will be needed in case an adjustment of static level is needed at the end of the test.

7. The well pump test should not be started until the water level in the pumping well and the piezometer have fully recovered from the step test conducted under item 2.

8. After the pretest water level readings have been made (item 6), the pump test may begin. The test should be started as soon after dawn as possible to have as much of the pumping portion of the test during daylight as possible.

9. Before the pump is turned on the geologist should make final water level readings in the pumping well and piezometer, and these will be considered the static levels. The transducers should be preset to make readings on one minute intervals for the first 10 minutes, and 10 minute intervals for the remainder of the test.

10. The pump should then be started and adjusted to the discharge rate established earlier. The transducers should be checked to assure that they are recording. The geologist should check the well discharge rate every 10 minutes during the first 100 minutes to try and maintain a continuous steady rate. The well discharge rate should be checked about every 100 minutes throughout the test. The pumping well water level should be checked frequently to make sure it is not falling so fast that the level falls below the pump intake.

11. During the pumping portion of the test the geologist should check the pumping well water level at least every 30 minutes to determine if the water level is approaching steady state conditions. The pumping portion of the test should be continued until the water level in the pumping well and piezometer are at steady state. If the water levels have not reached steady state after 24 continuous hours of pumping, the pumping portion of the test may still be ended if the water level has achieved semi-equilibrium. It may not be possible to reach steady state because of aquifer conditions, rainfall recharge, or river effects.

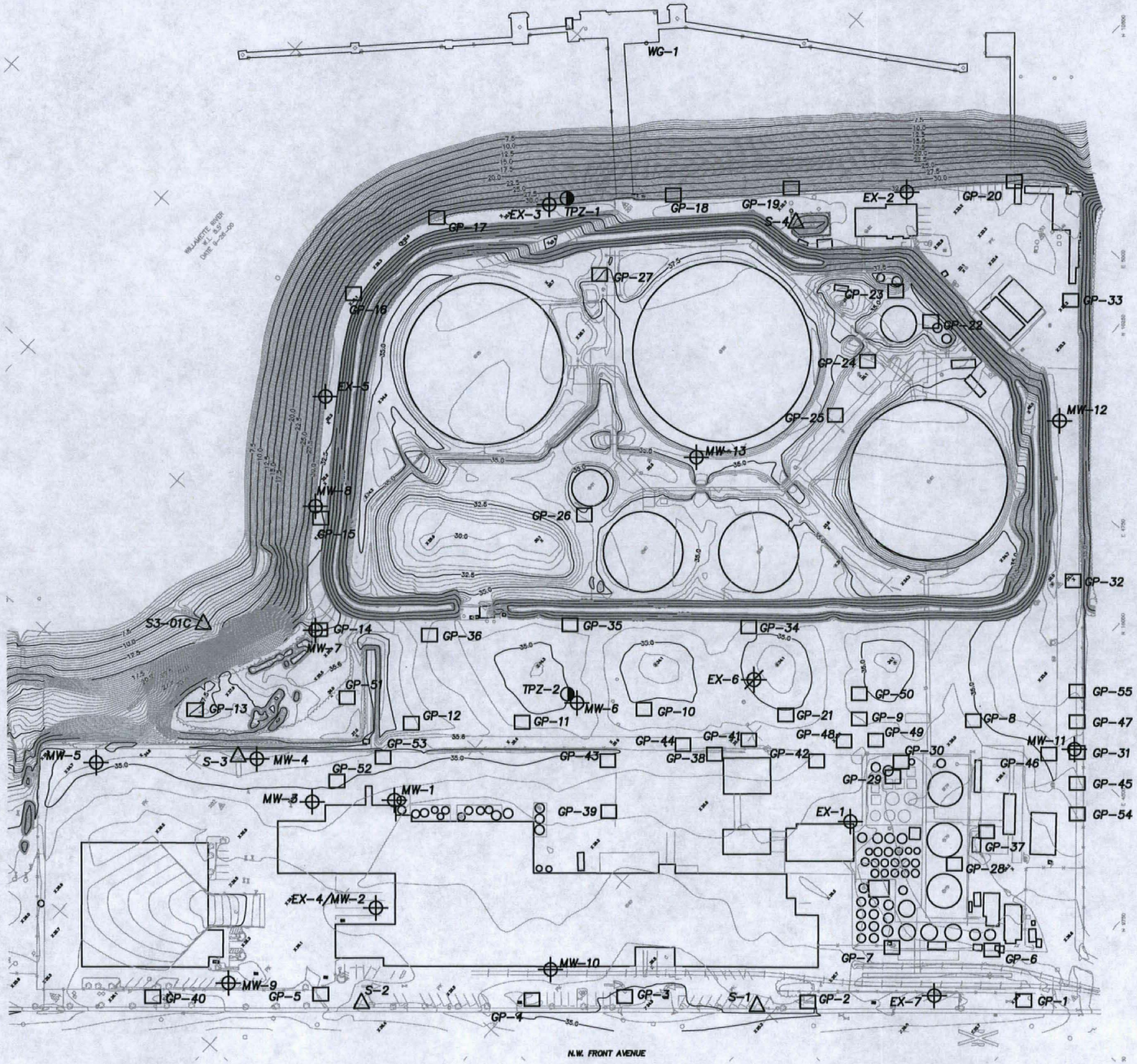
12. When the geologist has determined that the water level has reached steady state or semi-equilibrium, the pumping portion of the test may be stopped. Prior to shutting off the pump the geologist must obtain water level readings at the river gauge and all nearby wells. Then the pumping portion of the test is ended by simply turning off the pump. The pump and/or suction hose should not be removed from the well because that will affect the water level readings during recovery.

13. The water level recovery portion of the test will last approximately as long as the pumping test. The transducers will continue to make readings and the geologist must continue to make readings at other wells and the river.

14. The recovery test should be ended when the water level in the pumping well and piezometer have reached the static level determined in item 9. External forces such as river level changes or rainfall recharge may make it impossible to reach the static level determined before the end of the test. In that case the geologist should estimate how much the static level has been affected by outside influences by comparing water levels at a monitoring well outside the influence of the pump test. That measurement should then be used to recalculate the static level at the pumping well.

15. The field portion of the testing is over when the recovery test ends. The water level data will be used to calculate hydraulic conductivity and storage coefficient at each well.

16. The water discharged from each well will be treated onsite, if necessary. The need for treatment will be based on water quality testing for the site constituents of concern.



- MONITORING WELL
- DECOMMISSIONED MONITORING WELL
- GEOPROBE BORING
- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- VEGETATION
- BUILDING
- TANK
- PIEZOMETER

HORIZONTAL DATUM
COORDINATES ARE ON A LOCAL PLANE AND ARE ASSUMED.

ELEVATION DATUM
ELEVATIONS ARE BASED ON CITY OF PORTLAND BENCHMARK #2528.
ELEVATION = 34.64 FEET

0 150
Scale in Feet

Note: Figure prepared from drawing provided by IT Corporation.

MCC-0202016202-01.dwg cvd 5/17/02

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Boring and Well Locations
McCall Oil

the igroup

Memorandum

8405 SW Nimbus Avenue Beaverton, OR 97008-7141• **(503) 372-3663** • Fax (503) 526-0775

TO: Tom Gainer, DEQ

DATE: September 25, 2001 ~~July 17, 2008~~

FROM: John Edwards

PROJECT: 820910

RE: Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon

Work Completed

- Completion and delivery to DEQ of the IT Corporation (ITC) **Focused Remedial Investigation Interim Status Report, McCall Oil and Chemical Corporation, Portland, Oregon, April 30, 2001**
- 5/29/01 Meeting with DEQ to discuss the April 30 status report and conceptual plan for additional remedial investigation to fill data gaps
- Completion and delivery to DEQ of the ITC memorandum **Notes from 5/29/2001 McCall/DEQ Meeting at Northwest Regional Office, June 4, 2001**
- 8/1/2001 Meeting with DEQ to discuss sale of Great Western Chemical to Quadra Chemicals Ltd., plus plans and schedule for additional site investigation
- Monthly water level measurements continued at site wells and the river gauge

Planned RI Investigation

The ITC proposal to McCall covering the next phase of remedial investigation is attached to this memorandum. The scope of work includes seven tasks that were discussed with DEQ at the 8/1/01 meeting. The seven tasks are:

1. Monitoring Well Installation, GeoProbe Investigation, Piezometer installation, and Decommissioning of well EX-6.
2. Monitoring Well Development and Sampling
3. Sampling of All Monitoring Wells
4. Stormwater Sampling and Testing
5. Well Pump Tests
6. Data Management and Reporting
7. Project Management and Meetings

The attached work scope letter describes each of the seven tasks. The work will be done following the quality assurance and quality control procedures described in the November 16, 2000 RI workplan.

During the 8/1/01 meeting DEQ had the following questions and comments on the proposed workplan:

- McCall was requested to obtain the results of the new GeoProbe borings near GP-31 before finalizing the location of the new monitoring well near that location. McCall agrees and will follow DEQ's suggestion.

- McCall was requested to consider the placement of sediment screens on the site stormwater catchbasins in lieu of doing a source investigation for stormwater contaminants. We plan to evaluate the cost of installing sediment screens before making a decision on this issue.

- McCall was requested to provide information on how the planned monitoring well pump tests would be conducted. Please see task 5 of the attached work scope. We plan to conduct short term pumping and recovery tests on two monitoring wells, EX-1 and the new well between GP-10 and 11. The pumping portion of each test is estimated to require from 1 to 3 hours followed by a recovery phase of similar length. The pumping discharge rates will be determined in the field, but will be no higher than required to obtain reliable drawdown measurements in the adjacent piezometer. We will try to test well EX-1 near a river slack tide period to minimize river effects on the water levels.

RI Schedule. The planned schedule for the various tasks is discussed within the description for each task.

Attachments: Figure 1. Proposed Boring and Well Locations

Work Scope to do DEQ Requested Supplemental Remedial Investigation, Portland, Oregon, September 17, 2001

cc: Lee Zimmerli; McCall Oil and Chemical
Don Pyle, Lane Powell Spears Lubersky

September 25, 2001
~~July 17, 2008~~
Proposal 820910

Lee Zimmerli, Risk Manager
McCall Oil and Chemical Corporation
808 SW 15th Ave
Portland, Or 97205

Re: Work Scope to do DEQ Requested Supplemental Remedial Investigation, Portland, Oregon

Dear Mr. Zimmerli:

You and I met with DEQ on August 1, 2001 to discuss the proposed plan for additional remedial investigation at the Portland McCall and former Great Western Chemical facilities. The primary purposes of the investigation are to better define the extent of contamination in shallow groundwater, to improve our understanding of the shallow groundwater flow system, and obtain additional stormwater quality data. Following is the scope of work based upon DEQ's request for additional information.

SCOPE OF WORK

Task 1 – Monitoring Well Installation, GeoProbe Investigation, Piezometer installation, and Decommissioning of well EX-6.

This task covers the phased installation of 8 monitoring wells and 9 GeoProbe borings in the areas requested by DEQ. The installations would be completed in the months of September, November, and December, 2001. Three wells will be installed in September, two in November, and three in December. A piezometer will be installed in September, adjacent to the new well proposed between GeoProbe borings GP-10 and GP-11. The GeoProbe borings will be done in November.

The scope includes laboratory testing of five water samples (from borings near GP-31) and five soil samples (from borings near GP-9) for TPH (8015), four water samples for dissolved and total metals (from borings near GP-12 and GP-13).

Well EX-6 will be decommissioned in November per the requirements of the Oregon Water Resources Dept. The well is damaged beyond repair, likely by truck traffic.

All wells will be approximately 25 feet deep, constructed of two inch PVC and completed with a flush mount security casing.

The drill cuttings will be drummed. The drums will be labeled and placed in a temporary onsite storage area. ITC will assist McCall with analysis of the drum contents, but this scope does not include stabilization or disposal of the cuttings and water.

Task 2 – Monitoring Well Development and Sampling

The screens of each of the 8 new wells will be developed and groundwater samples obtained for laboratory testing. The samples will be tested for TPH, chlorinated VOCs, and Semi-VOCs. Only three wells will be tested for dissolved metals (the monitoring wells installed between GP-10 and GP-11, near GP-14, and near GP-15). The testing methods will be consistent with those used so far in the investigation.

The groundwater and suspended sediment obtained during development will be containerized and made available to McCall for onsite treatment or offsite disposal. This scope of work does not include treatment, offsite transport, or disposal of the development water/sediment.

Task 3 - Sampling of All Monitoring Wells

When the groundwater level rises to the normal wet season level, all nineteen wells (11 existing and 8 new) will be sampled. The groundwater will probably reach normal wet season levels between January and March, 2001. The attached estimated budget is based on testing for the same parameters described in task 2, except only 7 wells are tested for total and dissolved metals.

Task 4 - Stormwater Sampling and Testing

This task includes sampling catchbasins during a storm event. Four water samples will be tested (from locations S-1, S-2, S-3, and S-4) for TPH, SVOCs, total and dissolved metals. Four additional stormwater samples will be collected from the drainage ditch leading toward location S-3 in an attempt to determine the source of the elevated concentrations. Three catch basin sediment samples will be tested for TPH, SVOCs, and total metals.

Task 5 - Well Pump Tests

Short term pump tests will be conducted on two monitoring wells at the site. These are monitoring wells EX-3 and the new well that will be located between GeoProbe borings GP-10 and GP-11. The purpose of the tests is to obtain aquifer parameters that could be needed for future groundwater flow, contaminant transport, or modeling analyses. The tests should allow the calculation of hydraulic conductivity and storage coefficients of the shallow groundwater zone.

Task 6 - Data Management and Four Quarterly Reports

Under this task the geologic, soil and water quality databases will be updated with new information as the investigation progresses. The data will be validated and then assessed for consistency with earlier investigation results. The site maps showing soil and water contamination will be updated. Quarterly reports for September, December, and March will be prepared per the Voluntary Agreement with DEQ.

Task 7 - Project Management and Meetings

This task covers project management tasks, such as client communication, DEQ communication, meetings, management of ITC project staff, communication with other contractors, and project cost control.

SCHEDULE

This work scope is anticipated to cover the projected Portland site remedial investigation activities during the period September 2001 through the winter groundwater sampling round. The winter groundwater sampling date is not known, but will probably be between January and March, 2002.

FUTURE TASKS

Although the work proposed herein should largely satisfy DEQ with respect to the extent of contamination in groundwater, there are tasks that cannot be budgeted until DEQ agrees that the remedial investigation is completed. Those tasks include the following:

- Remedial Investigation Report (will be required)
- Ecological and Human Health Risk Assessments (will be required)
- Feasibility Study (may be required)

If you have questions, please call.

Sincerely,

IT CORPORATION

John E. Edwards, RG, CEG
Senior Consultant

the i group

Memorandum

8405 SW Nimbus Avenue Beaverton, OR 97008-7141• **(503) 372-3663** • Fax (503) 526-0775

TO: Lee Zimmerli DATE: June 4, 2001 ~~July 17, 2008~~

FROM: John Edwards PROJECT: 820910

RE: Notes from 5/29/2001 McCall/DEQ Meeting at Northwest Regional Office

---

Attendees:

Tom Gainer, DEQ project manager

Lee Zimmerli, McCall Oil

John Edwards, IT Corp

Summary of Meeting Minutes

Purpose of this meeting was to discuss the April 30 Remedial Investigation Interim Report, and what additional investigation may be necessary.

Edwards said that IT Corp (ITC) has conducted a preliminary risk screen of the data by comparing the contaminant concentrations to the EPA Region IX Preliminary Remediation Goals (PRGs). The result of that screening step did not show any data that would indicate the risk based need for site cleanup. ITC had therefore not identified any potential source areas onsite that needed further investigation. Edwards said that some additional shallow monitoring wells would be recommended to better define the groundwater flow system in the VOC plume area, and to better characterize the groundwater contaminants flowing onto the site from the Tube Forgings and Chevron Asphalt properties.

Gainer said that DEQ did not do a risk screening step to identify data gaps, but that DEQ expects that step to be conducted by McCall. He said that DEQ evaluated the interim report to determine if McCall had adequately characterized source areas and contaminant migration pathways. Gainer complimented McCall for the work performed to date and also said that the interim report presented the data well, unlike some of the reports read by DEQ.

Gainer said that the following comments were compiled from an internal DEQ meeting which included himself, Don Pettit (DEQ hydrogeologist), and the DEQ risk person on this project:

1. The solvent groundwater plume needs additional characterization. Gainer suggests two monitoring wells near the river between existing wells EX-5 and MW-4. Also suggests two wells along the plume axis between existing well EX-1 and the riverbank. Lee suggests possibly using a geoprobe to obtain one-time groundwater samples near the river to narrow down the possible location of wells.

2. For future site investigation DEQ wants McCall to test unfiltered groundwater samples for total metals. Edwards pointed out that natural metals contained in suspended sediment can result in overestimation of metals content in groundwater. Gainer noted that this approach is DEQ policy, and Edwards said that filtered samples also would be tested for later argument with DEQ on groundwater transport and risk issues.

3. DEQ wants further characterization of the extent and possible source area for the elevated arsenic groundwater concentrations near the former Chemax building. DEQ has not evaluated any risk issues associated with the arsenic in groundwater. DEQ expects McCall to evaluate whether these levels of arsenic present a risk to the river.

4. For the purpose of evaluating the groundwater to river pathway DEQ wants McCall to compare groundwater contaminant concentrations with ambient surface water quality criteria for the protection of aquatic life in the Willamette River. If the groundwater concentrations exceed the aquatic life protection criteria, then McCall would evaluate what additional studies are needed to evaluate risk to the river.

   Edwards asked if DEQ has a preferred technical method for evaluating groundwater transport to the river and resulting risk. Gainer said the DEQ has no preferred or approved modeling method. Gainer also said that some industries in the Portland Harbor are doing pore water testing near the river to try and answer this question. He mentioned Rhone Poulenc specifically. Edwards said we would contact Eric Blishke (DEQ) about the tests being done by others.

5. Gainer wants McCall to determine why TPH is elevated in soil near boring GP-9.

   What is the source of the contamination at GP-9?

6. With regard to the adequacy of the monitoring well network along the riverbank,

   DEQ feels that the network is adequate with the exception of an additional

   well(s) needed as addressed in item 1 above.

7. McCall is to conduct a risk screen to identify data gaps and to determine if sufficient information exists to perform a risk assessment.

8. McCall is to address the following issues with respect to the site stormwater catch basins:

- The catch basins should be cleaned of sediment on an annual basis. Gainer asked for information regarding McCall's standard maintenance practices. The maintenance program needs upgrading.

- What is the suspected source(s) of the contamination detected in catch basin sediment? Can we eliminate it? Gainer acknowledged that it may be difficult to conclusively determine the source(s).

- The concentrations of contamination detected in the sediment from basin S-3 could tie the site into contamination in the Willamette River. However, the low concentrations of contaminants detected in the river sediment sample obtained at the catch basin S-3 outfall implies that this catch basin may not have significantly impacted the river. When was catch basin S-3 last cleaned?

9. The interim report (section 4.2.1) mentioned groundwater detections with TPH gasoline profiles that the lab said does not match gasoline. He wants to know what is being detected. Edwards said that the lab is evaluating that issue.

Zimmerli asked if information is available from DEQ on sediment investigations being conducted by others along the river. Gainer said we should talk to Eric Blishke about this.

We agreed to meet with DEQ on July 11 at 1:30 to present our workplan to address the issues listed above.

Edwards said we would be contacting DEQ in the meantime for further details and discussion related to the DEQ issues.

Distribution: Tom Gainer, DEQ
Don Pyle, Lane Powell

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

January 19, 2009
030162-01

Mr. Jim Orr
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Fourth Quarter 2008 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Jim:

This status report provides DEQ with information on the remedial investigation tasks completed during the fourth quarter 2008 and work planned for the first quarter 2009 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED FOURTH QUARTER 2008

- submitted the Updated 2004 Remedial Investigation Reports for the McCall Oil Site
- continued preparation of Updated 2006 Source Control Evaluation report for the McCall Oil Site
- project management and meetings

PLANNED FIRST QUARTER 2009 RI TASKS

- submit Fourth Quarter 2008 Status Report (this report) to DEQ
- submit updated Source Control Evaluation report to DEQ
- project management and meetings

RESULTS

No samples were collected in fourth quarter 2008 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during fourth quarter 2008.

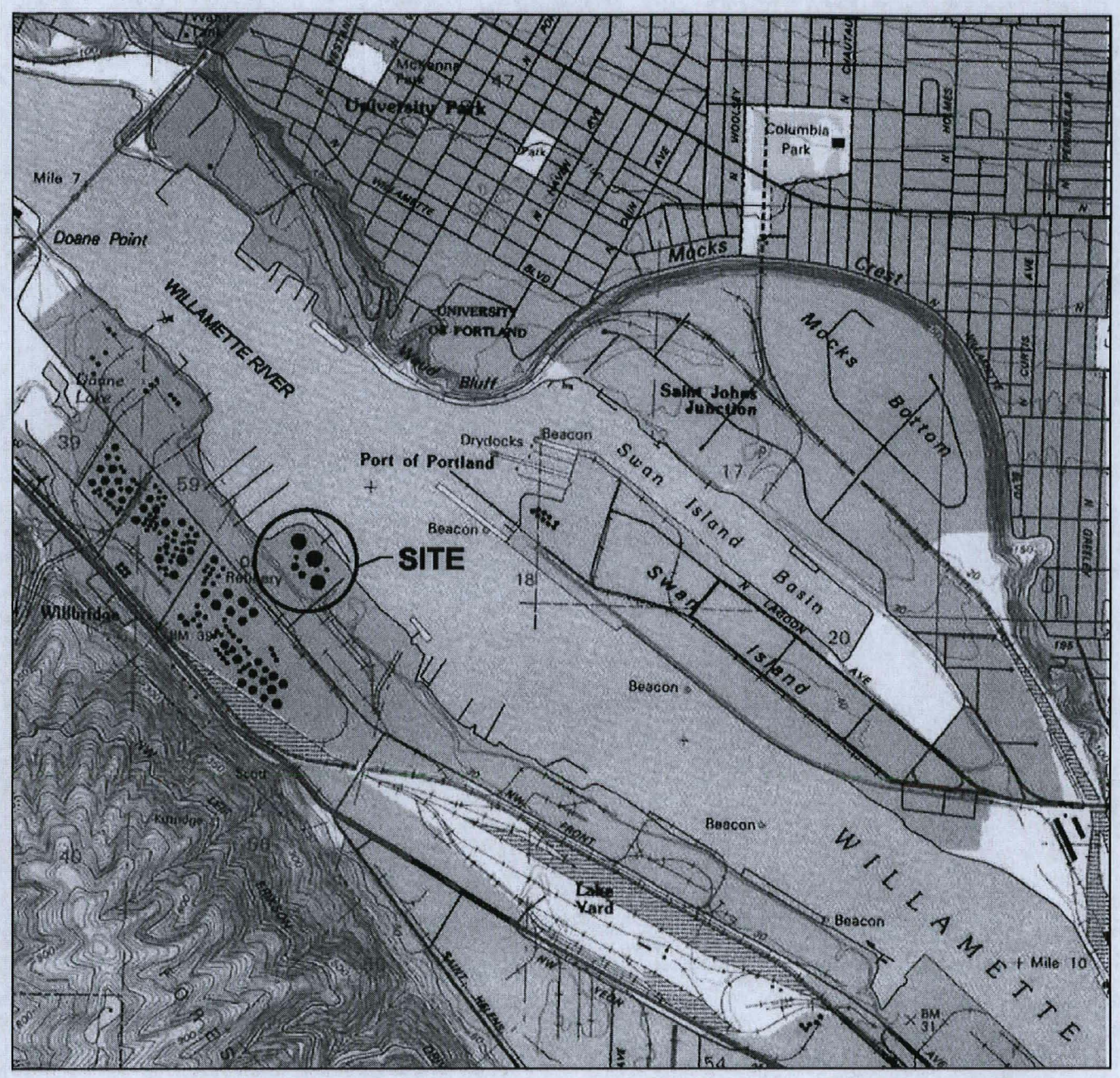
If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030182-McCall_Portland\030182010301620103016201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 333
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

July 15, 2008
030162-01

Mr. Jim Orr
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Second Quarter 2008 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Jim:

This status report provides DEQ with information on the remedial investigation tasks completed during the second quarter and work planned for the third quarter 2008 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED SECOND QUARTER 2008

- submitted Plan to Update 2004 Remedial Investigation and 2006 Source Control Evaluation reports for the McCall Oil Site to DEQ on April 30, 2008
- began preparation of response to the United States Environmental Protection Agency (USEPA) 104(e) information request
- project management and meetings

PLANNED THIRD QUARTER 2008 RI TASKS

- submit Second Quarter 2008 Status Report (this report) to DEQ
- received DEQ approval of April 30, 2008 Plan to Update 2004 Remedial Investigation and 2006 Source Control Evaluation reports for the McCall Oil Site on July 8, 2008
- submit updated Remedial Investigation and Source Control Evaluation reports to DEQ by September 30, 2008
- project management and meetings
- finalize response to USEPA 104(e) information request

RESULTS

No samples were collected in second quarter 2008 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during second quarter 2008.

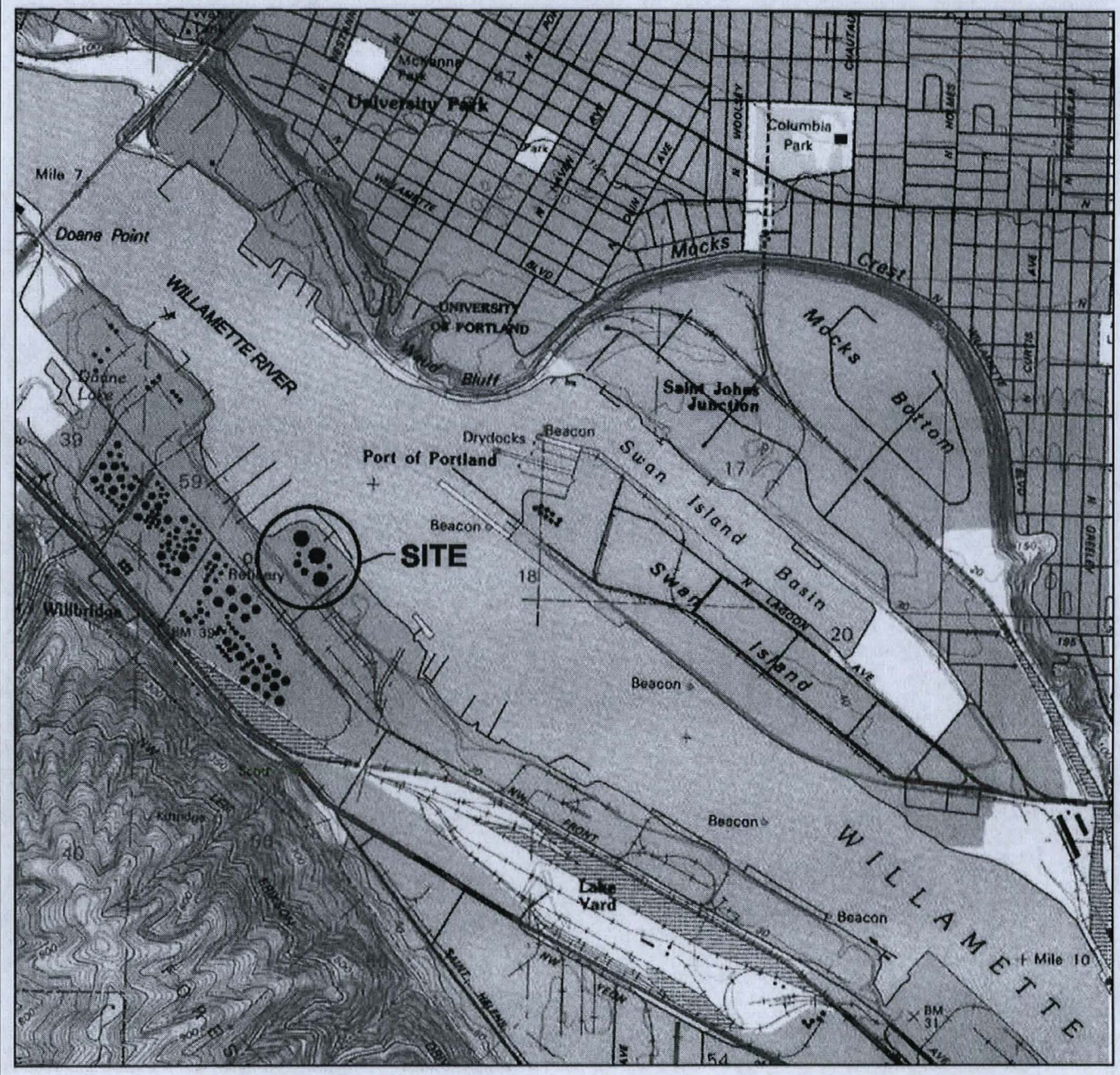
If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030182-McCall_Portland\03016201\030162201-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical

ANCHOR ENVIRONMENTAL, L.L.C.

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6650 SW Redwood Lane, Suite 333
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Phone 503.670.1108
Fax 503.670.1128

October 15, 2008
030162-01

Mr. Jim Orr
Oregon Department of Environmental Quality
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201-4987

Re: Third Quarter 2008 Status Report; McCall Oil and Chemical Corporation, RIFS, Portland, Oregon, ECSI #134

Dear Jim:

This status report provides DEQ with information on the remedial investigation tasks completed during the third quarter and work planned for the fourth quarter 2008 for the McCall Oil and Chemical site in Portland, Oregon (Figure 1).

WORK COMPLETED THIRD QUARTER 2008

- continued preparation of Updated 2004 Remedial Investigation and 2006 Source Control Evaluation reports for the McCall Oil Site
- continued preparation of response to the United States Environmental Protection Agency (USEPA) 104(e) information request
- project management and meetings

PLANNED FOURTH QUARTER 2008 RI TASKS

- submit Third Quarter 2008 Status Report (this report) to DEQ
- submit updated Remedial Investigation and Source Control Evaluation reports to DEQ
- finalize response to USEPA 104(e) information request
- project management and meetings

RESULTS

No samples were collected in third quarter 2008 and no new data was generated.

PROBLEMS ENCOUNTERED

No problems were encountered during third quarter 2008.

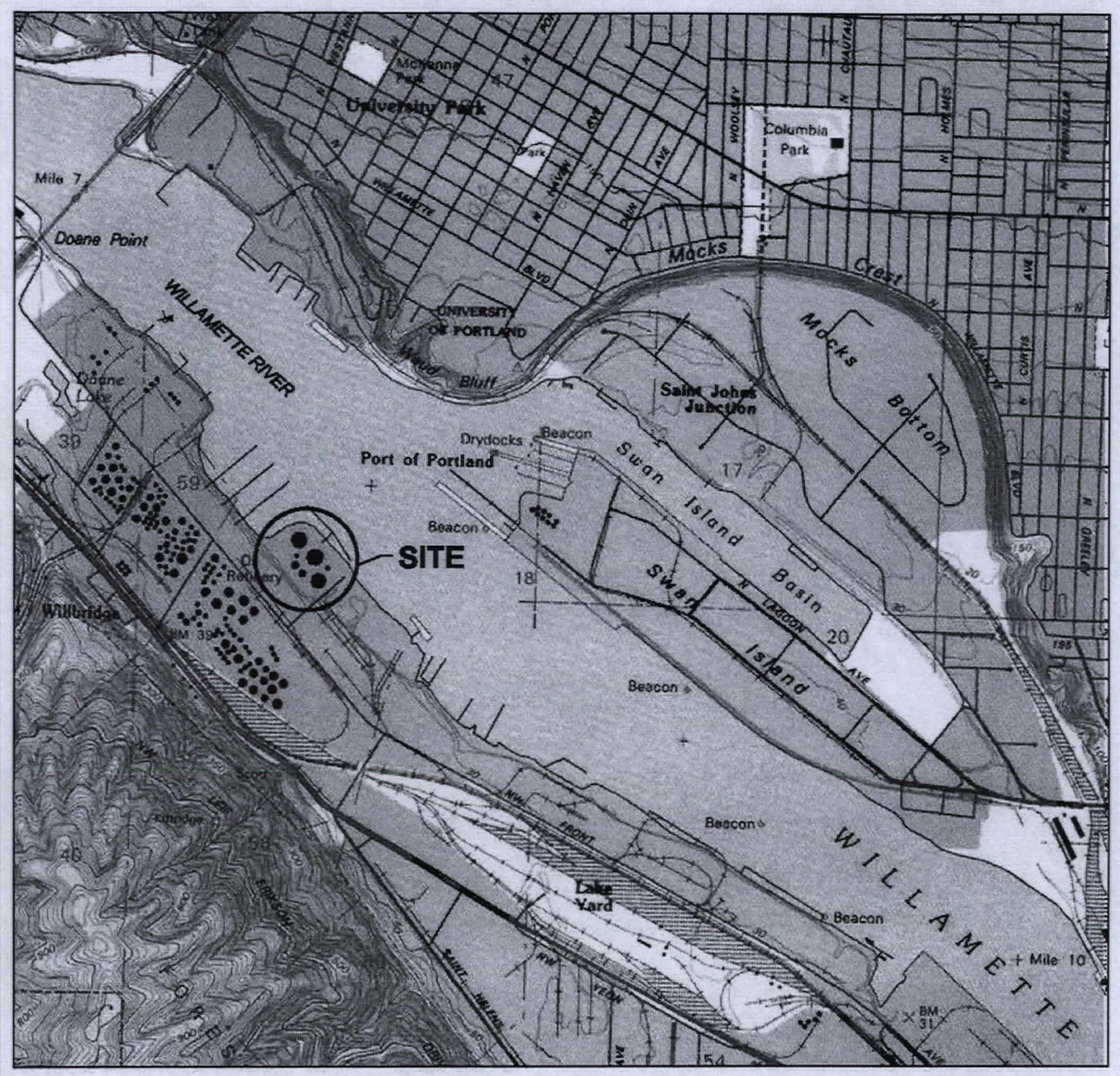
If you have any questions, please let us know.

Sincerely,

John J. Renda, R.G.
Anchor Environmental, L.L.C.

John E. Edwards, C.E.G, R.G.
Anchor Environmental, L.L.C.

Cc: Ted McCall; McCall Oil and Chemical



May 09, 2003 2:16pm cdavidson I:\CAD\Jobs\030182-McCall_Portland\030182D1\030182D1-12.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Vicinity Map
McCall Oil and Chemical